

DOCUMENT RESUME

ED 351 260

SO 022 566

TITLE International Economic Diplomacy: A Guide to the Global Economy: The Issues, Institutions, and Influences.

INSTITUTION Foundation for Teaching Economics, San Francisco, Calif.; United Nations Association of the United States of America, New York, N.Y.

REPORT NO ISBN-0-934654-93-X

PUB DATE 91

NOTE 116p.

AVAILABLE FROM United Nations Association of the United States, 485 Fifth Avenue, New York, NY 10017 (\$7.50).

PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.

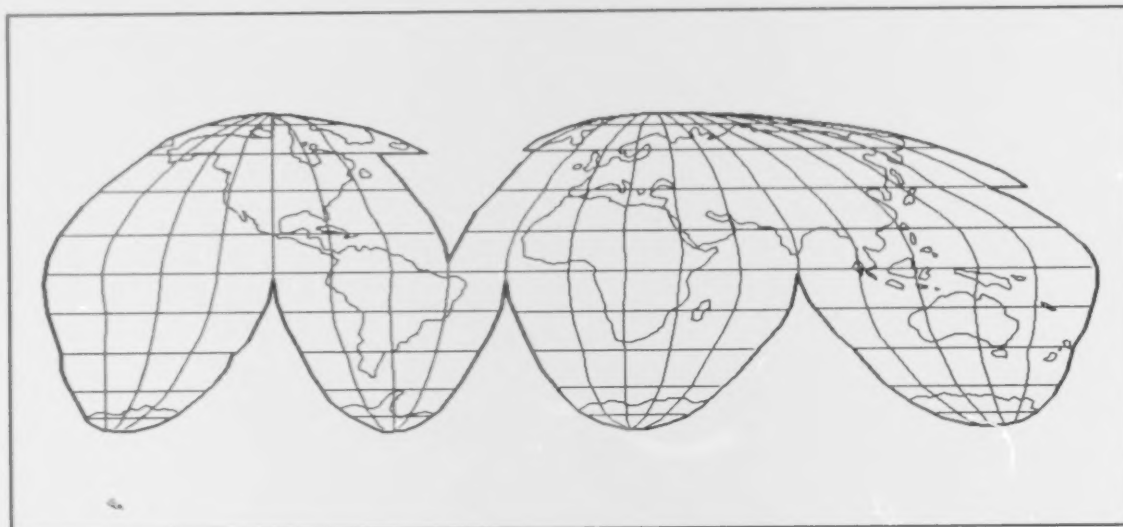
DESCRIPTORS Developed Nations; Developing Nations; Economic Change; *Economic Factors; *Economics Education; Educational Resources; Foreign Countries; *Global Approach; Higher Education; *International Relations; International Trade; Secondary Education; Social Studies; *Teaching Guides; World Affairs

ABSTRACT

This guide is designed to help teachers to prepare students for the rapidly arriving new world order through study of market economics and the global economy. The central section of the guide presents 10 case studies that describe a range of international economic concepts: (1) Debt and Oil; (2) Trade and Protection; (3) Foreign Exchange; (4) Foreign Direct Investment; (5) Migration and Immigration; (6) The International War on Drugs; (7) Four Asian Tigers; (8) The European Community; (9) The Soviet Union and Reform in Eastern Europe; and (10) International Aspects of Environmental Protection: Acid Rain, Greenhouse Effect. The guide also contains a survey of the world economy; a guide to international economic institutions; acronyms and a glossary; a note on measuring economic and population growth; world tables (economics and population); and a general bibliography. (DB)

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International Economic Diplomacy



A Guide to the Global Economy: The Issues, Institutions, and Influences

A Joint Publication of
The Foundation for Teaching Economics
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The United Nations Association of the USA

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International Economic Diplomacy

**A Guide to the Global Economy:
The Issues, Institutions, and Influences**



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Acknowledgements continue on page 104

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ISBN: 0-934654-93-X

Price: \$7.50

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PREFACE

As the world experiences the painful spasms of change, there can be seen on the distant horizon a "new world order" taking shape. Clearly, the Cold War stalemate in international relations of the past forty-five years has left the world scene. In its place has emerged a frenzied chaotic global dynamic fraught with conflict, war and peace, economic and social upheaval, and dramatic events. Just in the past year, the world has witnessed the demise of communism in Eastern and Central Europe (and soon in the USSR), the fall of the Berlin Wall and reunification of Germany, the Persian Gulf War, the dissolution of the Warsaw Treaty Organization and the COMECON, and the first treaty between the superpowers that will actually reduce strategic nuclear arsenals. The world is swiftly moving away from the bipolar East-West conflict toward a global system of power-sharing - the "new world order."

Multilateral summits like the Group of Seven (G-7) meeting of the leading industrialized countries and the United Nations Security Council are surpassing the superpower summits of the past as the most influential forums of the world. The increasing integration of Europe and North America is radically changing the international economic system. The community of nations is shifting its primary concerns away from the military and political alliances to the politics of the economic haves versus the have-nots. The international relations playing field is increasingly the same for all the teams. No longer can the "non-aligned" countries play the East against the West game to leverage the best deal. Now, there are universal standards to go by - democracy, freedom of economic choice, prosperity and environmental quality. Quickly fading are the clash of competing and conflicting values and rapidly rising is the power of shared values. Yet, the realization of the "new world order" is still some time away. Vestiges of the old world order politics still remain and a host of new challenges are emerging.

The economic disparities between countries that have developed and are developing present formidable problems and opportunities. There is considerable potential for trading blocks to replace the military/political alliances. Will commerce be the continuation of warfare by other means or a stable road to lasting peace? Will long-standing conflicts between the rich nations of the North and the struggling and desperately poor nations of the South become less or disparities greater? Will the divergent environmental agendas which will be thrashed out during the June 1992 United Nations Conference on Environment and Development in Brazil resolve and strengthen the prospects for a stable international economic system?

No less formidable are upheavals in many nation states throughout the world. Yugoslavia, the Soviet Union, India, Ethiopia and Liberia are only some of the countries experiencing crisis. The disparities among neighbors are building up explosive forces. The main apparent counter force to the disintegration of multi-ethnic countries is the regional and international intergovernmental frameworks like the European Community, Organization of African Unity, and the United Nations. Increasingly, the world powers are investing more of their political currency into multilateral institutions like the United Nations. Obviously, the days when a single country can dominate world events or stand alone in isolation are gone.

To get beyond the myriad obstacles to the "new world order," the United States, which has emerged from the Persian Gulf War as the current pre-eminent world power, must commit itself fully to working with the collective leadership of the emerging world order that the Persian Gulf War fostered. If the rich nations

hope to be even richer and the poor nations expect to join the rich nations club, all will have to embrace the "new world order's" values and stick to them. There is no room for half-heartedness or partial commitment to this imperative. Is the world ready for such a "new world order?" Only time and deed can answer this question.

What the future will bring is in the hands of tomorrow's leaders, the "succeeding generation" as the young are labelled in the United Nations Charter. The challenges and problems before us now will be with our world for some time in the future. Indeed, the emerging global tensions that will be universally borne will emanate from many existing economic and political value systems and new value may emerge. How well the "succeeding generations" understand how these values affect the world we live in will determine the realization or demise of the "new world order." Only through study and reflection will tomorrow's leaders successfully meet the challenges and solve the problems that threaten the "new world order" when it is their turn.

This publication was developed with the expressed purpose of facilitating the preparation of the "succeeding generations" for their eventual roles as our world leaders of the future. Although we may not know what tomorrow will bring, we do know that much can be learned from the experiences of the past and present, so at least the succeeding generations can avoid some of the mistakes of others when they assume power. Our only hope is that our efforts will make a contribution to this end.

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August 1991

INTRODUCTION

From the earliest times of recorded history peoples of the world have faced the problems of earning a livelihood, individually and collectively. The relative well-being of individuals and families and the rise and fall of nations depends critically on the choices that are made. Choices, like taxes and death, are unavoidable to everyone because we all face constraints in time and money. And nations must make choices too, because every nation faces the problem of scarcity; a society has many wants but only limited resources to produce and fulfill them.

The impact of making better rather than worse choices can be illustrated in many ways, and Figure A shows the results of four different choice alternatives as revealed in the average growth rates of 60 developing countries over two plus decades. The different choices that were made resulted in three different average growth rates of the nations output (GPD), 3.1%, 3.8%, or 5.5%. The effects of these different growth rates are substantial. As shown in the formula in Part 6, at a 3.1% rate of growth, output doubles in 23 years, at 3.8% it doubles in 18 years and at 5.5% it's 13 years. The choices clearly made big differences in terms of material standards of living.

The lowest growth rate was experienced by countries who made two dubious choices: (1) to artificially value and control the exchange rate of its national currency with other nations currencies at too high a level, thereby lowering its opportunities to export and sell its goods and attract foreign investments (Case 3 explains why these results occur); and (2) to invest very little in basic education. The second group (3.8%) made only one of these growth reducing choices, either (1) or (2). The highest growing group let their currency's values move with market forces of supply and demand to compete in international markets (buying and selling), and they also invested, at least modestly, in basic education. In short, because of scarcity choices can not be avoided, and as these numbers show, the costs of bad policies and the rewards of good ones are bigger than we might think. Choices count.

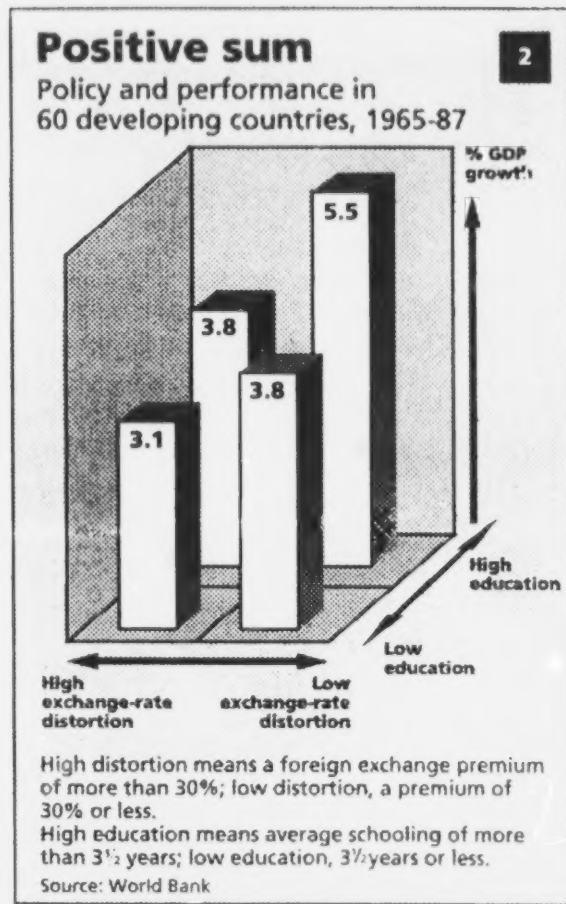
Four Basic Questions for Every Economic System

Although nations approach the use of their resources differently, every society must answer the same four basic questions: What goods and services and how much of each should the economy produce? Who should produce them? How should they be produced? Who should share in their use? The way each economic system answers these questions affects how each person in the system produces and uses goods and services. Each way chosen also affects the overall economic well being of the nation and its relations with other nations.

What and How Much Should Be Produced?

Each nation exists in a world of scarcity. Consequently we all face the problem of trade-offs: no one can have everything, so more of this means less of that. An automobile manufacturer must decide how to use its supply of labor, steel, and rubber. Should it produce subcompacts or full-sized automobiles? Then how much of each? Regardless of the type of good or service being produced, the maker must address the trade offs and answer questions like these. In every economic system, there are guidelines and signals, such as prices, that tell the controllers of limited resources what they should do with those resources.

Figure A Choices and Economic Growth for 60 Developing Countries, 1965-87



Source: *The Economist* July 13, 1991, 77.

Who Should Produce What?

Within each economic system, different people do different jobs. Should a person become an auto mechanic, a paralegal aide, an elementary school teacher, an electrician, a lawyer, a farmer, or what? Who decides which people will produce which goods and services? Should individuals or government decide? The type of economic system a nation selects and creates determines who makes these decisions and how.

How Should Goods and Services Be Produced?

The answer to the question of how people produce goods and services concerns methods. The answer lies in the right mix of the factors of production: land, labor, and capital. For each good and service produced, there is always a trade-off among the factors of production. A farmer could use laborers with horse-drawn plows to plow a field or a tractor and driver. Depending on the resource amounts and their prices, what mix will be efficient? What combination of resources will get the best results? Managers of businesses must ask themselves this question constantly.

Who Should Share in What Is Produced?

This last question relates to who gets the goods and services produced, things like health care, education, food, and so on. Some people have more than others; why? Who decides? Do people get goods and services according to the amount of work they do? Should everyone get the same amount regardless of what they contribute to the economic system? What about the unemployed, the old, the disabled, and children? Who provides for them? What part does government play in deciding who gets what? There are many different possibilities: Marx said "From each according to his abilities, to each according to his needs." Others have said, "more work, more pay."

Economic Systems and Planning

The fundamental role of the governing system in any society is to give a set of rules for channeling competition constructively and resolving the conflict among individuals who can't satisfy every want, given the constraint of scarcity. Each economic system has a framework of formal institutions, such as laws and rights, and informal institutions, such as customs. Humans have created the institutions in their economic systems and they can change them.

Types of Economic Systems

Each society answers the basic questions according to its view of how best to satisfy the needs and wants of its people. The goals of a society determine the kind of economic system it will have. Economists have identified the principal types of economic system: 1) traditional; 2) command, or centrally planned; and 3) market, or capitalist. The economic systems described are pure, or ideal types. They are economic models, not examples of the real world. But they improve our understanding of most existing systems, which are mixed. Nations are economically identified by the way in which each one organizes most of its economic activity. The United States, for example, has a mixed economy but is considered to have a

market economic system because the economic questions are answered mainly in response to supply and demand. The People's Republic of China also has, to some extent, a mixed economy. It is said to have a command economy because most economic activity is planned by the government.

Traditional System

A pure traditional economic system answers the four basic questions according to tradition. Things are done "the way they have always been done." Economic decisions are based on customs, beliefs--often religious--and ways of doing things that have been handed down from generation to generation. Traditional economic systems exist today in parts of Asia, the Middle East, Africa, and Latin America.

For example, the San people of the Kalahari Desert of South Africa live in a traditional economy. They are roving hunters and plant gatherers. They live and travel in groups of 40 to 60 relatives and friends. The men hunt and trap antelope and other desert animals for food and clothing. They use bow and arrow. The women gather plants, roots, and berries. The group shares whatever food there is. When the food in an area is used up, the group moves on in search of new food supplies.

An individual does not choose his or her role in this kind of society. It is regulated by what people have done in the past. This has been found to work, at least up to a point. Each generation answers the basic economic questions in the same way that each previous generation has answered them--by tradition.

In the traditional Indian village economy of a hundred years ago, the jobs of fathers were handed down to sons. If you were a potter or a leather-maker, your son would do the same job because you were part of a *jati*, a group all of whose members followed the same occupation. In this way, the society assured that there were enough agricultural laborers and special groups of people who would follow key professions. The agricultural workers had traditional relationships with the families of landowners and worked for them year after year. Their rewards, perhaps a certain percent of the harvest or a certain number of bags of grain, were understood by everyone in the village. (What was also understood--and enforced--was that you couldn't seek employment outside the village. In return, the landowner owed you payments which peer pressure or village opinion would enforce.) This method of payments evolved over hundreds of years to perform the function of keeping everyone at necessary tasks without making people feel that the system exploited them, or at least not enough to lead to revolt. People didn't bargain about their pay as they do in the United States, Canada, or in other market systems. Their station in life was traditionally determined right from birth.

Command, or Controlled, System

A pure command economic system is in some ways similar to a traditional economic system. In a pure command economic system, the individual has little influence over how the basic economic questions are answered. Government owns or controls the factors of production and therefore, makes (or attempts to make) all decisions about their use.

The "government" may be one person, a small group of leaders, or a group of central planners in a government agency. These people choose how resources are to be used in production and decide the distribution of goods and services. They even decide who will do what. In China and the Soviet Union, for the most part you don't pick your job. You must have an internal passport to travel, and if the government won't let you change jobs, you can't move. The government, through a series of regulations about the kinds and amount of education available to different groups, guides people into certain jobs.

Market, or Capitalist, System

The opposite of a pure command economic system is a pure market economic system, or capitalism. In a pure market economic system, government does not intervene. Individuals own the factors of production and decide for themselves from market information the answers to the four basic economic questions. The "market" in this sense is not a place, but rather a network of activity between buyers and sellers of goods and services. Buyers and sellers choose to do business with those who satisfy their preferences and opportunities best. The exchange of goods and services may take place in a worldwide market for goods such as crude oil. Or it may take place in a neighborhood market for the services of someone to mow lawns, deliver papers, or shovel snow.

In a pure market economic system, producers of goods and services decide how to use their resources based solely on signals from the market. Government planning has no part in the decisions, except to set a framework for setting rules and enforcing contracts. Whether people buy a certain good or service or not indicates to producers the various ways to use their resources. Suppose more people begin buying the CD's of a singing group. This increase in demand signals the record company to invest more time, money, and effort in supplying CD's by that group. If only a few people buy CD's by a particular group, the CD company will respond to the lack of sales and not sign that group up again. People are also free in a pure market economic system to sell their labor as they wish. They may take, refuse, or change jobs whenever they choose, unlike in the traditional Indian economy, or the command economies of China and the Soviet Union.

Mixed Economic System

The three general models are useful for analyzing existing systems, even though today, almost all economic systems are what economists call mixed economies. A mixed economy typically contains characteristics of a command economy and a pure market economy. The mix will vary so that any one economic system leans more toward one pure type than another.

The United States, for example, tends much more toward the market system than toward the command system. All decisions are not, however, made by individuals reacting to the market. Federal, state, and local governments regulate some areas of business; for example, the rates that electric companies may charge.

The People's Republic of China, in contrast, tends much more toward the command than toward the pure market system. The private sector, though growing, is still a small percentage of the economy in that country. The central government is still in command of most everything that happens.

Most command economic systems are associated with communism and socialism. In these systems individuals have the right to buy consumer goods, such as stereos and books. In contrast, individuals cannot own income-producing items such as machinery and equipment. In communist or socialist economic systems, the rights to use income-producing goods (called capital) are assigned and enforced by government employees. The main distinction between communism and socialism is usually that the central direction from the government is much greater in communist systems and even extends to individuals' choice or assignment of jobs.

The Question of Planning

Often people think of capitalism, or the market system that we have in the United States, as one in which there is no planning. Socialist and communist systems feature a lot of planning, but this distinction is overemphasized. Planning is unavoidable. The issue is not whether there is planning, but who does it. In a market system, private individuals and businesses do the planning on their own behalf. In socialist systems and to a much greater extent in communist systems, central planners undertake the planning on behalf of everyone in the community. The distinguishing characteristic of a price system--capitalism--is the use of the market to coordinate people, plans, and actions and to answer the four basic economic questions through demand and supply effects on market prices. Prices act as the coordinating mechanism in a decentralized economy.

The Global Economy

On a typical day in the United States, you might ride on a bus that was made in Germany or be picked up at the airport by a friend in a Japanese, German, Korean, or Yugoslav car. You check into a hotel owned by an Arab company. The workers are immigrants, some of whom are still learning English. From room service, you order food from France, Mexico, and Spain. In the city, you use your Visa or Mastercard, similar to a credit card now being used in the Soviet Union. (You could use your credit card in London or Paris or Karachi as well.) Reading the newspaper at lunch, you find an article about interest rates in the U.S. falling because political upheavals in other countries have caused residents and businesses there to take their capital outside their country and invest it in politically stable America. It's hard even to know what is meant by a Japanese or an American firm. Half of Xerox's 110,000 employees work abroad. Half of Sony's employees are not Japanese. Digital Equipment gets more than half of its revenue from overseas operations.

The point is that we now work and live not just within our own nations, but as part of a global economy. Global integration has increased over the past several decades, as transportation and communication costs have declined and more information has become available about opportunities to trade. What's more, political events throughout the USSR and Eastern Europe and elsewhere are rapidly breaking down rigid controls in favor of more open economies so that trade can take place more freely with other countries.

In the global economy, financial investments gravitate to places that yield the highest expected rates of return. Americans invest at home, in Europe and elsewhere; Europeans and Asians do likewise. So do others. Overall foreign investments in the United States rose to over \$2 trillion in 1990, 10 percent higher than the year before. Since 1980, direct foreign investment in the United States has increased four-fold. Capital in the form of loans, corporate factories, equipment, shares of stock, and research laboratories moves around the globe with little respect for national boundaries.

We Are One World

Today, more than ever before, we are one world economically speaking. An understanding of international economic concepts, activities, problems, and prospects is critical for any world citizen. In the pages that follow, you will gain this understanding through a series of case studies. In each case study we

will present many of the concepts critical to understanding economics in general, and international economics in particular. In later sections of this book there is information about the regions of the world as well as major international economic institutions. Finally, at the end there is a glossary of terms, a list of acronyms, a general bibliography, and statistics about the world economy. But to begin, we start with a brief current world economic survey.

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Robert Heilbroner, *The Making of Economic Society*, 6th ed. (Englewood Cliffs, N.J.: Prentice Hall, 1980) has an excellent chapter on the types of economy.

See Oscar Lewis, *Village Life in Northern India* (New York: Vintage, 1965), Ch. 2, "Caste and the Jajmani System," for an example of a traditional economy.

Part Two

Survey of the World Economy

During the last ten years, the world economy has changed significantly. The United Nations Department of International Economic and Social Affairs notes three significant changes: (1) changes in the basic "functioning of the world economy"; (2) changes in the relative positions of countries in terms of wealth; and (3) the emergence of different "growth poles"--regions in which economic expansion is rapidly outpacing growth rates in other regions. (For a guide to growth rates, see Part 6 and for measures see Part 7.)

The World Economy in Perspective

The present state of the world economy is largely the result of significant changes in the 1980s. Notable shifts in world income occurred in the 1980s. Diversity in growth trends increased. And the populations of the nations of the developing world grew more rapidly than those in the developed world.

Growth of World Output and Population

World output grew just over 30 percent in the 1980s. This was slower than during the preceding decade in which growth exceeded 45 percent. World population had increased to 5.2 billion by 1990, growing by 20 percent during the 1980s. Ninety percent of world population growth during this period came in the developing world. World per capita output grew by an average of one percent each year in the 1980s compared to an average of two percent a year in the 1970s.

The Developing Countries of the Third World

While growth in the world economy slowed during the 1980s, the pace of advance also became more diverse among the various regions of the world. The differences of growth rates were greatest among regions in the Third World, the poorer developing countries.

Latin America. Growth for Latin America as a whole plummeted over the last decade. The average annual rate of growth of gross domestic product (GDP) was a mere one percent for the 1980s, compared to 5.5 percent for the 1970s. The per capita GDP for all of Latin America was almost ten percent lower in 1990 than it had been in 1980.

Africa. Economic growth for the African continent as a whole showed similar decline. The average annual rate of growth in GDP was less than one percent in the 1980s, down from five percent in the 1970s. During the 1980s, per capita output on the African continent fell 20 percent.

South and East Asia. The region of South and East Asia, including China, showed a marked contrast in its economic growth in the 1980s as compared to that in Africa and Latin America. GDP grew at an average rate of seven percent during this period.

As expected, the small (in terms of total population), newly industrialized countries (NICs) in the region turned in stellar performances in growth. Less anticipated were the high growth rates in the less developed countries in the region. Although most of these continue to face rapid population growth, enough to potentially swamp their output growth, they have managed to improve their economic growth per capita in the 1980s.

The Developed Market Economies

The developed market economies showed a more even pattern in terms of growth. The developed market economies comprise several geographic regions. They are united by both the size of their economies and, with some shades of difference, their reliance on market forces in directing their economies. In the earlier era of the Cold War, they were also politically united (though, again, with various degrees of commitment) in opposition to the Soviet Union and the spread of Communism.

The Group of Seven. In terms of economic, political, and military influence, there are seven dominant nations, sometimes referred to as the Group of Seven, or G-7, in the developed world: the United States, Canada, France, Germany (both parts now), Italy, Japan, and the United Kingdom. It was from these countries at the London Economic Summit in mid-July 1991 that Soviet leader Mikhail Gorbachev requested economic aid for restructuring the Soviet economy.

The Other Developed Economies. Other nations with developed economies include Denmark, Belgium, the Netherlands, Spain, Norway, Finland, Sweden, Ireland, Switzerland, Greece, Australia, and New Zealand. Each mainly uses market forces to direct the nation's economic activity. In many, though, there is some form of central planning as well.

Recent Performance of the Developed Economies. During the 1970s, the average annual growth in GDP of the G-7 economies was 3.1 percent. It slowed in the 1980s to an annual average of 2.6 percent. Population typically grows more slowly in the developed world making it easier for them to post gains in per capita income. For the group as a whole, per capita income grew an average of two percent a year in the 1980s. In the future, however, low birth rates may be a problem. Low birth rates and longer life mean that many developed nations in the future will have larger numbers of elderly and a smaller work force. The younger workers will be increasingly taxed to pay for retirees' benefits. In particular, the impressive growth of the Japanese economy in the last several decades is unlikely to continue at the same levels as that nation faces the constraints of a smaller work force.

The economies of the developed world became more integrated in the 1980s, particularly among the Western European countries. This trend among the Western European nations toward trading blocks is likely to spread and accelerate as the nations move nearer to political and economic unity after 1992.

The Soviet Union and Eastern Europe

During the latter half of the 1980s, the Soviet Union attempted to revive its failing economy by reforming itself into a more market-oriented system. Leading up to the moments of Mr. Gorbachev's "house arrest" near the Black Sea reforms had moved and stalled and moved again very irregularly. In addition, ethnic tensions in the Soviet Union have erupted into violence from the Baltic republics to the Muslim

regions in Soviet Central Asia. (For a summary analysis of this see *The Economist* July 13, 1991, 21-23.) An entrenched bureaucracy has also been a hindrance to reform. Even though the country had a successful year in agriculture in 1990, the breakdown of the distribution system created severe food shortages in large cities such as Moscow and Leningrad.

Because the Soviet Union has avoided market forces for so long, the money income and savings of Soviet citizens have not been matched by the availability of goods. Years of controls on consumer goods accompanying sizable wage increases for workers caused many citizens to accumulate large stores of rubles. As the government took tentative steps toward a market economy, the combination of a scarcity of many goods (especially consumer goods like soap, food, and the like) coupled with vast holdings of rubles shot prices skyward. In a desperate response, the Soviet government instituted a drastic program in February, 1991, which required that Soviet citizens turn in large-denomination rubles for smaller ones unless they could prove to a commission that the currency had been acquired legally.

The rest of Eastern Europe also moved toward market economies after the Soviet Union began to release its grip on the Eastern Bloc and began withdrawing military forces which had been in Eastern Europe since the end of World War II. Some countries, such as Czechoslovakia, made the political transition relatively easily. Others, such as Romania, seemed unable to produce a workable alternative to Communist domination. Still others in Eastern Europe, such as Poland, continue to labor under enormous debt owed to banks in the West.

Economic data have always been difficult to get from the Communist nations, and what has been available has been suspect. Even if the data are not doctored for political reasons, the lack of market incentives in the economies makes data with respect to prices and profits wholly artificial. Nonetheless, from the information which can be obtained, it seems certain that economic growth in the Soviet Union and the Eastern Bloc slowed significantly during the 1980s. As Soviet political domination wanes and its economy declines, the Eastern Bloc is increasingly attempting to align its economic interest with the West. Because Western Europe is poised to unite in 1992, many Eastern European countries are struggling to trade with and join a unified Western Europe.

Commodity Prices and Terms of Trade

One important factor for most of the developing countries in the world is the price of raw commodities. The reason is that raw commodities are still the dominant export in many of these countries. In turn, commodity prices affect terms of trade. The terms of trade simply describe the relationship between the prices of exports and the prices of imports which a trading country faces. Between 1980 and 1988, prices of non-fuel exports from the developing nations fell by 40 percent after adjusting for inflation (prices adjusted for inflation are said to be in real terms, or real prices). In the 1980s, fuel export prices fell by even more than the prices of non-fuel commodities. The price of fuel exports fell 50 percent during the 1980s, though they moved temporarily upward again as a result of events in the Persian Gulf. Countries exporting crude oil benefit from higher fuel prices, but the non-fuel-exporting countries in the developing world are harmed by them.

The fall in prices for exports of raw commodities adversely affected the terms of trade facing many developing countries. Latin America as a whole faced a fall of 25 percent in its terms of trade. Africa (including oil-rich Nigeria) and West Asia (including the oil-exporting countries of the Persian Gulf region) saw an even more severe worsening of their terms of trade. In West Asia and Africa, the terms of trade for that region fell by 40 percent during the 1980s. In short because of this decline in the terms of trade it took

more exports, nearly 40% more, to pay for imports into West Asia and Africa.

During the same period, trade among the developed nations grew dramatically. Much of the trade was in manufactured goods rather than raw commodities, although it is worth noting that the United States is still the largest exporter of raw materials in the world. Prices were relatively more stable for goods traded among the developed nations compared to the falling prices of raw commodities, the problem afflicting the developing countries.

Income Transfers

As a result of the developing world's outstanding debt to the industrialized countries, their falling commodity prices, and worsening terms of trade, there was a significant transfer of wealth in the 1980s. The Latin American, West Asian, and African countries transferred wealth to their industrialized trading partners in the U.S., Western Europe, and Japan. These were transfers resulting from past contracts, economic transactions and ensuing price changes.

Globalization

New technologies, especially in communications, have brought the world's countries closer together. As a result, world trade has increased significantly. The total volume of world trade in 1990 as measured in U.S. dollars amounted to over \$3 trillion. This was up from approximately \$2 trillion a decade earlier. During the 1980s, world trade increased an average of four percent a year, a rate which would double its volume in a bit more than 17 years. Most of the growth of trade over the last ten years was in manufactures, which grew faster during the period than did actual world output of manufactures.

Current World Trends and Projections

As it enters the last decade of the twentieth century, the world continues to be characterized by different levels of development as well as by differences among geographical regions and economic systems. The following sections highlight the main recent events, problems, and projections by region and economic system.

The Developed Market Economies

At the close of the 1980s, the longest post-war economic expansion seemed to be faltering at least temporarily in the developed economies. The average growth rate fell from 4.3 percent in 1988 to 3.5 percent in 1989. Of the Group of Seven nations, only Germany showed significant economic growth during that year. And at the end of the 1980s, four of the seven — Canada, the U.S., Britain, and Japan — suffered an average one percentage-point decline in their average annual growth rates.

Among the smaller industrialized nations, the slowdown was not so severe. Most of these nations, however, had not reached the same peak levels of growth in the 1980s that the Group of Seven had enjoyed. Greece saw its industrial growth rate decline at the end of the 1980s, but still managed a 2.5 percent annual rate. Several countries even experienced increases in their annual growth rates despite the overall decline in the rest of the developed world: Denmark, Ireland, the Netherlands, New Zealand, and

Norway each saw increases in their average annual growth rates of one percentage point or more.

Through the long expansion period of the 1980s, the economies of the United States and Japan grew faster than those of Western Europe. The trend reversed somewhat during the last few years, and it is conceivable that the coming integration of Europe in 1992 will allow Western European economies to match or exceed the growth of the U.S. and Japanese economies. The opening of Eastern Europe and its integration with the West and elsewhere will also benefit the West European economies. A recent trend among the developed world economies and in Asia is increased intra-regional trade at the expense of international trade, a trend that may be strengthened by the 1992 European integration and its spread.

The Japanese are expected to sustain their high levels of growth in the near future, but they are coming up against some potentially serious constraints. Current population trends portend the possibility that Japanese firms will not have an adequate supply of labor in Japan. Another significant factor is the growing economic power of the NICs along the Pacific Rim. These countries promise to offer Japan stiff competition in markets throughout the region.

Unemployment Unemployment among the developed countries continued to decline, reaching an average of 6.2 percent by 1990 after having been 6.7 percent in 1988. It remains below the recent historic high of 8.5 percent reached in 1983, when the industrialized world was mired in the worst recession since the Great Depression of the 1930s. In all the major industrialized nations, the highest capacity utilization (i.e. the percentage of total productive capability that is actually put to work) occurred in either 1988 or 1989. Even though unemployment decreased in Europe in this period, it remained above historic levels. During this period, only New Zealand saw unemployment actually increase. Belgium, Canada, Finland, Germany, Portugal, Sweden, Britain, and the United States, until recently, saw unemployment decline even as economic growth began to slow. Unemployment has now begun to rise with the current slow down in economic activity.

Inflation Inflation, the great concern of developed countries throughout the 1970s, was low throughout most of the 1980s, but began to rise somewhat more noticeably after 1987. Inflation rose in 1988 to 3.6 percent from 3.3 percent the previous year. Fuel prices led the overall rise in prices, and food prices followed a distant second in most developed countries. Part of the pressure on prices stemmed from tighter labor markets: as production expands to full capacity, it becomes more difficult for firms to find available workers. Recent concern over inflation has led most G-7 central banks to curb growth in their money supplies. Interest rates rose throughout most of the developed countries in the late 1980s as a result.

Developing Economies

For the developing countries as a whole, the 1990s opened on a sour note. The average rate of growth fell throughout the 1980s, closing at 3.5 percent in 1989, down from 4.3 percent just a year earlier, and current estimates are that per capita output will continue to grow approximately one percent a year.

South and East Asia. This region has the largest number of poor in the world and Figure 1 shows the growth of real GDP by country in this region. Overall it has managed an impressive growth record. Although growth slowed in the late 1980s, it has remained strong -- six percent overall between 1988 and 1989. Despite the large population in the region, per capita output could continue to grow, experts say, at around four percent a year.

Three potential trouble spots exist: Philippines, Pakistan, and India. Each are troubled by political problems and large populations. The Philippines and Pakistan are expected to experience similar declines in economic growth and India's is expected to remain low.

Although growth in other countries in the region may remain relatively strong, they are not expected to continue at the impressive levels of the recent past. All the countries of the region depend heavily on exports, as shown in figure 2. This is particularly true of the NICs of the region. Of late, however, world demand has been growing more slowly. A problem faced specifically by the NICs is that they may face severe resource limitations, especially with regard to available labor.

Latin America. Latin America's ongoing debt crisis and the fall in non-fuel commodity prices are likely to hamper its economic prospects for some time to come. At the end of the 1980s, average annual growth in the region was a dismal one percent. Since population is growing more rapidly than that, per capita income has fallen in the last several years. Throughout the region there are unprecedented levels of inflation, symptomatic of the large transfers of wealth which have occurred as a result of the debt crisis.

The economic fortunes of the region are tied to the performances of three dominant economies: Brazil, Argentina, and Venezuela. Following Chile's early lead each has taken stringent steps towards reforming their economies to make them more market driven, efficient, and less dependent on foreign loans. Brazil's decline in the late 1980s has been followed by a sizable but incomplete rebound in economic activity. Mexico too has been able to stave off major problems regarding its foreign debt, and if the present government can maintain its current program, long-term prospects are good. Things in other countries of the region, such as Argentina, may get worse, however, before they improve. This could create political problems. Many Latin governments of the past have been undone by economic policies that did not satisfy unions and other powerful interest groups in the countries. Therein lies the hope and if the developing countries can avoid protection of special interests, and can free up trade and compete internationally, the 1990s could lead to significant growth. Indeed, the periodical *The Economist* (July 13, 1991) is predicting precisely that.

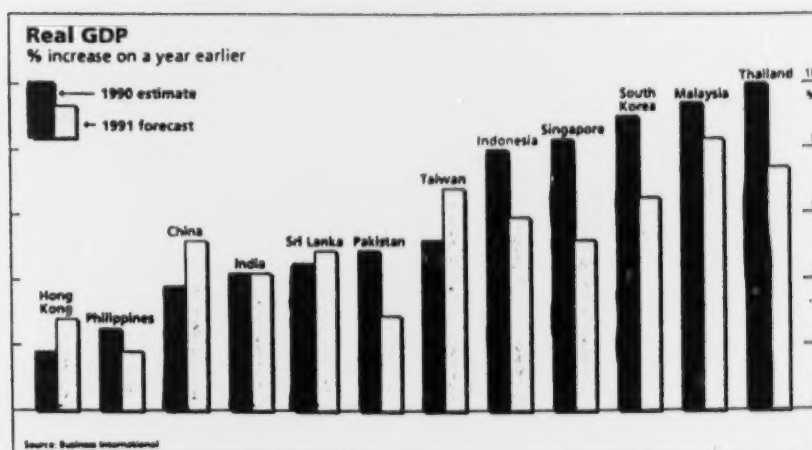
Africa. The economies of Africa have been able, on the whole, to achieve modest growth in the very recent past. Even if they can sustain these output gains modest growth is unlikely to keep things from deteriorating for many people in the region. The reason? Population increases are racing ahead of economic growth. Even with annual increases in total output of three percent, per capita output will continue to decline, if population growth continues above this three percent.

Improvements in agriculture are expected to help matters. Moreover, oil exporters, such as Nigeria, will benefit if there are upward trends in energy prices. Most important for the long-run outlook is that many nations in the region are pursuing economic reforms that are showing some initial signs of success. Political stability is vital. Also crucial are external conditions, such as commodity prices and the weather. Oil prices are particularly important to the oil-exporting countries in West Africa. If oil prices rise, the prospects for economic growth in those countries increase.

Overall, the nations of Africa seem locked in a race between economic growth on the one hand and population growth on the other. Only the former's keeping pace with the latter will prevent economic conditions from deteriorating for many people in the region.

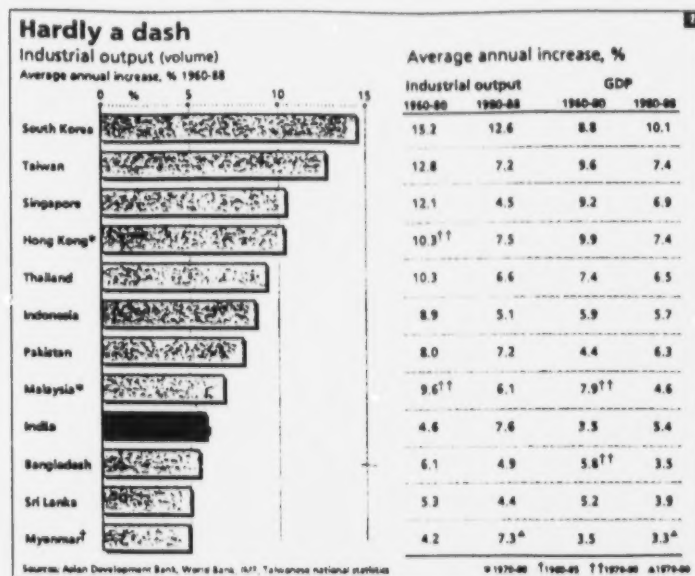
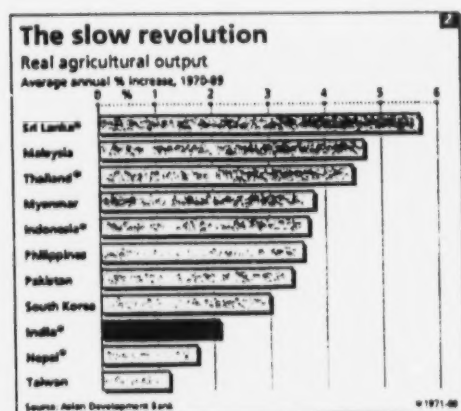
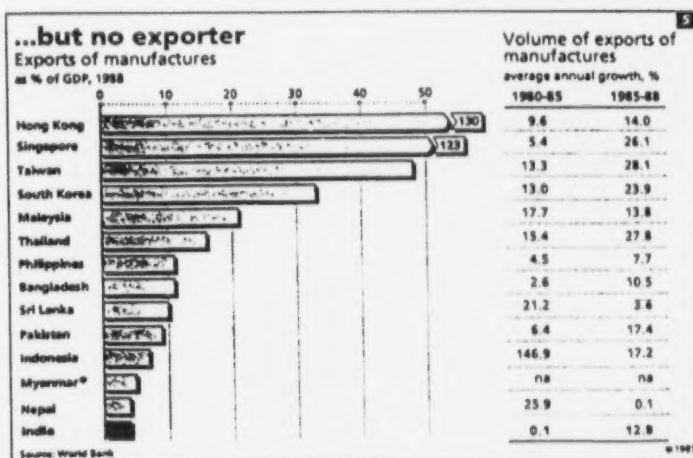
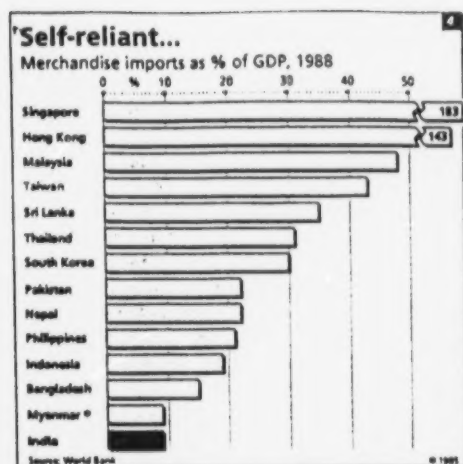
The Middle East In 1988, the long and bitter war between Islamic rivals Iran and Iraq came to a close. Oil prices rose substantially in 1989. As the volume of oil exports rose with demand at the end of the 1980s,

Figure 1 Growth of Real GDP in Asia



Source: *The Economist*, May 4, 1991, 103.

Figure 2 Imports and Exports as a Fraction of GNP, Asia
Agricultural and Industrial Growth, Asia



Source: The Economist, Special Survey of India, May 4, 1991, 7,10.

annual growth in the region increased to 2.5 percent.

Prospects for the region changed overnight, however, with Iraq's invasion of Kuwait in August, 1990. The United Nations sanctions against Iraq and the mustering of allied forces to liberate Kuwait have put the region into turmoil. All of the economies of the region have suffered from the war. The region has witnessed environmental destruction and the forced migration of people (especially the Kurds). Trade into and out of Jordan, for example, virtually stopped once Allied Forces in the Gulf began their blockade of Iraq, one of Jordan's leading trading partners.

The Soviet Union and Eastern Union Political upheavals in the Soviet Union and the Eastern Bloc have drastically affected the economies and economic prospects of this region of the world. The political and economic reforms that had begun tentatively in the Soviet Union were followed by more extreme reforms in other East European countries. First Poland, then in rapid succession Czechoslovakia, Hungary, and other Eastern Bloc countries ousted Communist leadership. Finally, what had been termed the jewel in the crown of the Soviet empire, East Germany, broke free of Communist domination and began to move toward reunification with West Germany. The Soviet Union was willing to accept trade credits and other promises of economic assistance from prosperous West Germany to allow reunification to take place. In 1990, after having been divided since the Second World War, East and West Germany joined hands again.

Despite the euphoria induced by their new-found freedoms, many of the countries are still plagued by severe economic problems, problems which may temporarily worsen before they get better, as each country struggles to replace the old mechanisms of a command economy with those of a free market system. Crucial to the success of these efforts is the formation of private property rights, a concept new in some regions long dominated by a system that held that capital and land should belong to the state.

Political uncertainty has meant that many newly formed governments in the region are reluctant to commit themselves to sweeping economic reform. Only Poland has been able to put in place a comprehensive economic stabilization plan. Two countries in the region, Romania and Bulgaria, remain politically unstable and as yet have been unable to reach a national consensus on economic reform. Recently there has been large-scale excess immigration out of the Soviet Union and Eastern European countries such as Bulgaria. This is dramatic evidence that even as old political systems give way, the short-run prospects of economic improvements are dim. Some countries were able to make a smooth transition to a new system of government; others were not. Even countries that accomplished the transition easily, such as Czechoslovakia, were unable to translate their new system into rapid economic improvements. Romania, Bulgaria, and Hungary all experienced declines in economic activity following their being freed from Soviet domination. In the period immediately following the sweeping political changes, economic growth in Eastern Europe remained slow, ranging from highs of two percent in some countries to even a low of negative ten percent in 1989. Czechoslovakia recently committed itself to a reform program that would gradually replace a command structure with a market-driven system over a three-year period. Still the economic gains may be slow and most of the countries in the region continue to be hampered by bottlenecks characteristic of the former command economies in key sectors such as fuel, raw materials, and transportation.

The region continues to be characterized by low investment as well as bottlenecks in transportation and distribution. Prospects for significant foreign trade seem limited mainly to trade with the members of the old Council for Mutual Economic Assistance, Eastern Europe's counterpart to the Economic Community in Western Europe. All of this will change, of course, when economic reforms take hold and private property

and other institutional guarantees are established to allow the freer movement of resources to their highest valued uses. With appropriate reforms new waves of growth could rapidly occur in Eastern Europe, but political events and uncertainties in the USSR preclude any viable forecast there.

Note: Bibliographical Suggestions for the Survey of the World Economic are in Part 8 following the **General Bibliography** at the end of the volume. **World Tables on Economic Indicators and Population** are in Part 7.

Case Study 1
Oil and Debt:
The Web of International Economic Relations

Oil, Price Shocks, and Money

The globalization of our economic world has been repeatedly shown to us by actions taken by the Organization of Petroleum Exporting Countries. OPEC, as it is known, is an international organization that has sought to co-ordinate petroleum output and prices among member petroleum-producing countries since it was formed in 1960. The organization's founding members were Iran, Iraq, Kuwait, Libya, Saudi Arabia, and the country which led the initiative in forming the organization, Venezuela. OPEC now also includes Algeria, Ecuador, Gabon, Indonesia, Nigeria, Qatar, and the United Arab Emirates. However, it does not include the largest oil-producing country in the world, the Soviet Union.

OPEC's potential strength was not revealed until the mid-1970s. In the wake of the Arab-Israeli conflict of 1973, the Arab members of OPEC sought to pressure the United States and its allies over their support of Israel with a boycott of sales of crude oil to the U.S. They failed in the political objective of loosening Western ties with Israel, but the boycott awakened the world to the potential economic clout of the Arab states and OPEC.

As shown in Figure 1-1, during 1973 and 1974 OPEC quadrupled the price of crude oil. The economies of Western Europe, Japan, and the United States slipped into a recession, partly because of the "oil shock." As the world demand and use of oil fell, the revenues to OPEC receded but only partially. OPEC initiated a second oil shock in 1979 (Figure 1-1). This time the price of a barrel of crude oil doubled, to nearly \$34 a barrel.

Warning: Recycled Petro-dollars May Be Dangerous to Your Financial Health

Every time the OPEC countries increased the price of oil to the world, they increased their revenues from their oil exports. Meanwhile even with ambitious development plans, spending on imports was relatively unchanged, and for many years OPEC countries built up huge dollar surpluses. Between 1974 and 1979, for example, the OPEC dollar net inflow was \$235.5 billion! Three countries--Saudi Arabia, Kuwait, and the United Arab Emirates--accounted for over half of this "surplus" of U.S. dollars.

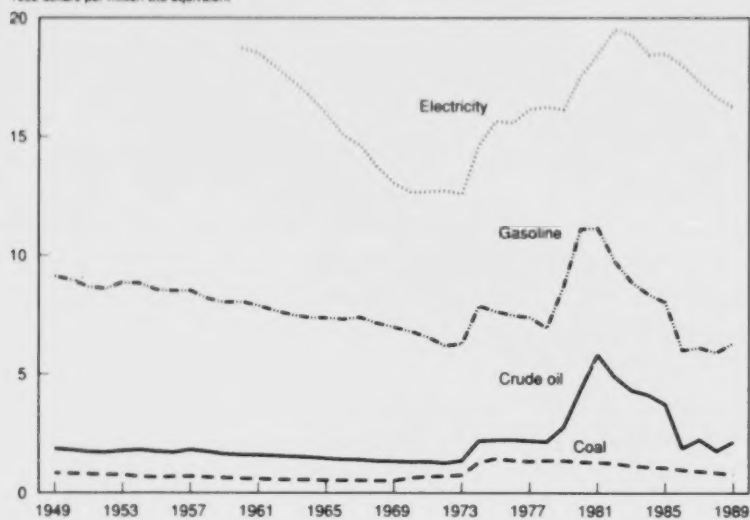
As OPEC took in these surpluses of dollars, they deposited them in banks in the United States and Western Europe; thus began the process of recycling these "petro-dollars." By 1980, \$45.5 billion had returned to the United States. Another \$84 billion had flowed into European money markets. A smaller share, \$8.75 billion, went to the International Monetary Fund (IMF) and other international lending organizations. In turn, these banks and organizations began making loans with these petro-dollars deposits, and OPEC members themselves lent \$43.25 billion directly to non-oil-producing developing countries.

In addition to loans, some OPEC nations started buying stock and investing directly in corporations in the United States and Europe. They bought valuable real estate such as hotels and amusement parks. For example, Kuwait bought 14 percent of Germany's Daimler-Benz Corporation, which makes Mercedes automobiles. It also bought ten percent of Volkswagen do Brazil, the Volkswagen subsidiary in Brazil.

Many Western banks found that they could lend their new of petro-dollars deposits to developing countries. From Poland to Brazil, Western bank lending officers in three-piece suits carrying attaché cases

Figure 1-1 Real Energy Prices

Real energy prices do not show a long-term upward trend.
1982 dollars per million Btu equivalent

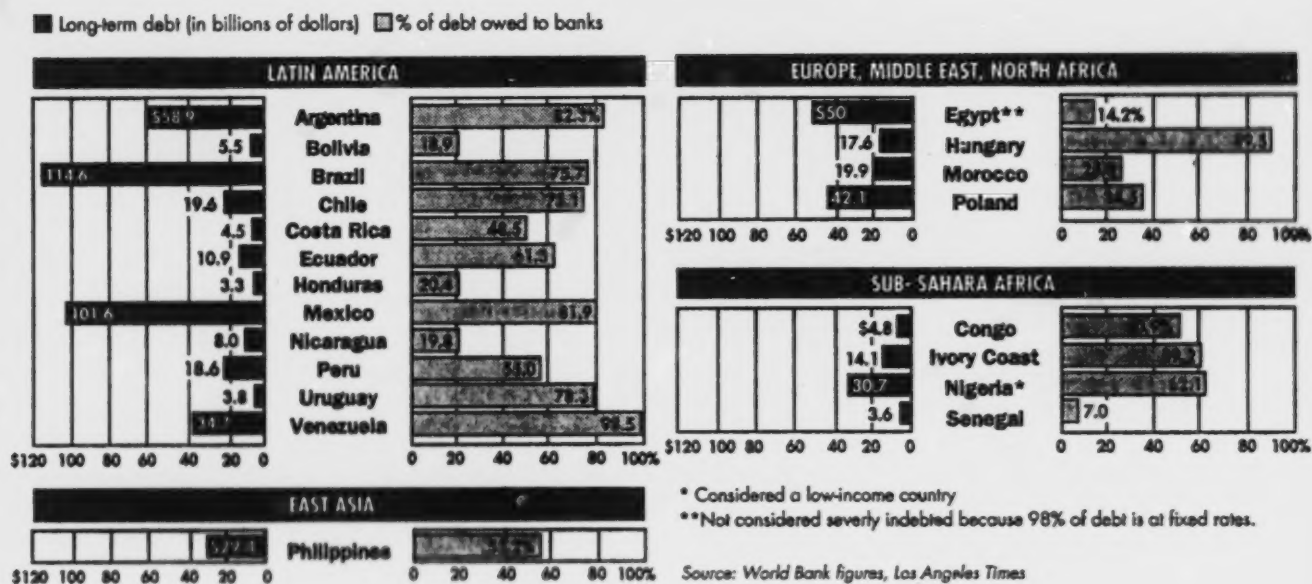


Source: Department of Energy

Source: **Economic Report of the President** (Washington, D.C.: U.S. Government Printing Office, 1991), 84, 103.

Figure 1-2 Select Third World Countries

Debt in billions of Dollars, at Year-End 1986.



Source: Jonathan Power, "Solving the Great Debt Crisis", *San Francisco Chronicle*, "Briefing" Section, 26 December 1990, 2:2.

stuffed with blank loan applications traveled to the capital cities of the Third World, as the lesser-developed countries are called collectively. The guiding philosophy of these Western banks was best stated by the chairman of Citibank in New York, Walter Wriston: "Countries don't go bankrupt." As he and many other Western bankers were to find out, countries may not go bankrupt, but they don't always pay off their debts.

The Wobbly World of Global Banking

John Maynard Keynes, one of the leading economists of the twentieth century, said that if you owe your banker a thousand pounds (British currency) and can't pay, you've got a problem. But if you owe your banker a million pounds and can't pay, *he's* got a problem. That logic applies to Third World debt.

In 1974, total Third World debt was \$100 billion. By 1980, the total was a staggering \$300 billion. Amidst all this Third World debt, the world economy in the early 1980's was suffering the worst recession since the Great Depression of the 1930s.

During that time, Poland had defaulted on \$8 billion of \$24 billion in loans. In the wake of the Falklands War, Argentina stopped payment of \$3 billion it owed to British banks. Nigeria, which was an oil-exporting nation, requested \$300 million in emergency relief. Mexico, also an oil exporter, needed \$20 million to stay afloat. It is fitting that the 39th floor dining room at Wriston's Citibank Park Avenue headquarters in Manhattan was the site for a meeting in 1982 of bankers representing 115 of Mexico's largest lenders. The Wriston philosophy had come home to roost. The group met for several days devising a scheme to prevent Mexico's default on loans to some 850 banks. Mexico owed \$80 billion, some \$25.8 billion to U.S. banks, including \$2.5 billion to Citibank, \$2.3 billion to Bank of America, and \$2.5 billion to Chase Manhattan Bank.

Many banks had set aside reserves to cover losses on their lending. Although it was forced to show a loss of \$1 billion for the year, Citibank set aside a reserve in 1988 to cover 30 percent of its third-world loans which might go into default. It has since increased the reserve. Under stricter requirements set by the Bank of England, British banks set aside funds to cover 50 percent of potential defaults in 1988. The cost to the banks was three billion dollars. When leaders of Japan, Western Europe, and the United States met in Paris in the summer of 1989, Third World debt stood at \$1.3 trillion, compared to \$0.1 trillion of 1974. Figure 1-2 shows the countries in the worst shape in terms of debts owed.

Good Debt, Bad Debt

Unfortunately many of the developing countries failed to spend their borrowings wisely. A prime example is the Caribbean nation of Jamaica. Under the leadership of Prime Minister Michael Manley, in the 1970s (and 1980s) the government of Jamaica undertook costly public works projects. The projects were designed to put people to work but had little regard for the usefulness of the projects. These expenditures were appealing to many of the Manley government's constituents, and they rewarded the government with their political support.

Despite their political appeal, the investments failed to generate income with which to pay back the loans, i.e. the interest and principal. When this happened, private international banks pulled back from making further loans. Then the Manley government turned to the World Bank.

The World Bank assists countries by providing loans on terms more favorable than a private lender would be willing to offer (as described in Part Four). The World Bank's loans are generally long term (30

years or more) and are made directly to the government applying. The Bank's operations are supported by contributions and funds borrowed from world capital markets.

The World Bank is clearly not a charity. Its officers set strict terms for borrowers. When the Manley government turned to the Bank, the Bank sought assurances that the government would get its economic house in order. It required that the Manley government pursue policies, though not politically popular at home, that were needed for economic growth and stability.

It seems now, however, that the Manley government was unable or refused to rein in the excesses which had plagued the country's economic policies. The government failed to make badly needed cuts in the public payroll. It failed to root out corruption and inefficiency in government bureaucracies. In the end, the World Bank followed many of the private banks in refusing to make further loans to the Manley government. The Manley government was finally forced out of office.

O.P.E.C.'s Extended Effects

Unfortunately this story of Jamaica is only one of many, and even some of the oil rich OPEC countries wasted large fractions of their new riches on wasteful economic policies. For example, Nigeria, despite being one of the richest of the Black African nations, insisted on undertaking expensive large-scale projects, often for their political appeal rather than economic value. Nigeria spent millions for public works designed to put people on the public payroll, and by 1982, oil exports financed 80 percent of government expenditures. Similar extravagances on the part of the Venezuelan government resulted in Venezuela's paying out 79 percent of its oil revenues in 1982 as interest on its monumental debt.

Another effect was the impact of the dramatic fall in demand for oil in the early 1980's. Following the oil shocks of the seventies, the industrialized countries began to conserve oil and promote alternative energy sources. Figure 1-3 above shows the record of energy consumption in the United States: energy consumption per dollar of GNP was cut there by nearly a third since the first oil shock of 1974. For example, rather than use oil, new technology allowed electrical companies to burn coal more cleanly, reducing harm to the environment. It became more profitable, and less damaging, to substitute coal for oil.

In addition to greater conservation, higher prices of oil induced many nations to engage in more higher cost drilling. For example, Britain and Norway began to pump oil from under the North Sea even though the North Sea is a rugged and costly place in which to drill for oil. The higher oil prices made the North Sea profitable.

A Kinder, Gentler Debt: The Brady Plan

James Baker, U.S. Secretary of the Treasury under Ronald Reagan, once argued that economic growth would eliminate the Third World's debt problem. After the debtors expanded and modernized their capacity to produce goods and services, they would earn enough to meet their debt obligations. But as the nineties opened, it seemed unlikely that the Third World could do that quickly enough to meet their repayment schedules.

By 1989, Baker was George Bush's Secretary of State, and the U.S. Treasury had a new Secretary, Nicholas Brady. Brady now argues for write-offs: having banks forgive debt, so that debtors need pay off only a part of the original amount. After all, Brady argued, banks were only collecting a portion of the debt on time anyway. For example, in 1989, a dollar of Mexican debt was worth only 60 cents. That is, one could sell a Mexican \$100 promise to pay for \$60 on what is called the secondary market, a market

in which investors and speculators buy existing debt.

Brady sought to attract the banks to his write-off plan by having industrialized nations such as the U.S. and Japan join with the World Bank and the International Monetary Fund to guarantee the new, "written down" debts. What he proposed was less repayment, but greater security that banks would receive the payments.

Objections came from virtually every corner of the U.S. and the plan remains in limbo. Congress objected as did the State Department and the Federal Reserve (the central bank of the United States). One frequent objection was that, while lowering the debt burden would help the debtor nations, the burden of guarantees to private banks would be passed on by the international lending organizations to the governments that support them, and ultimately to taxpayers.

Another objection was that Brady's plan might actually hurt the debtors. If the Third World did not repay its debts, banks would be more reluctant to deal with Third World borrowers. Short-term debt relief for the Third World would lead to their long-term isolation from international lenders. And without international lending, the Third World would be unable to borrow to finance investments needed for their economic growth in years to come.

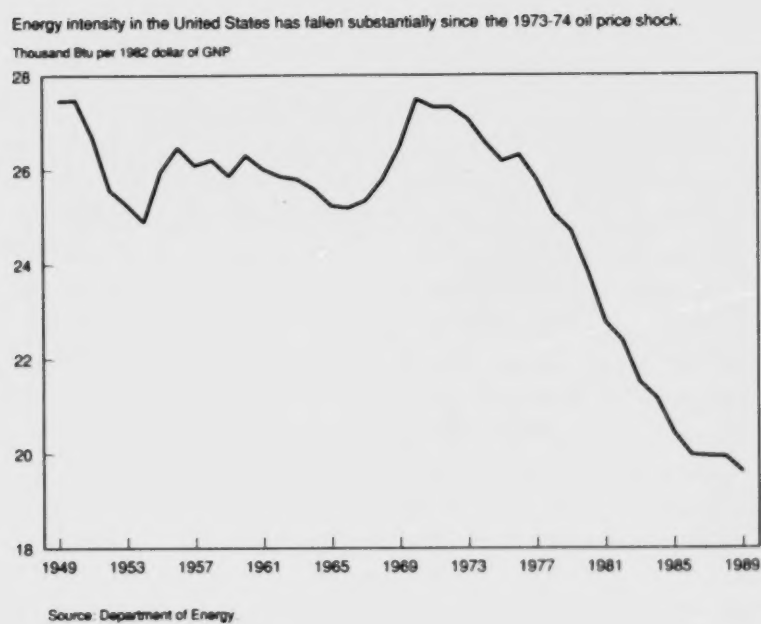
Such a dilemma often invites strict conditions if new loans are to be made. A recent example is an accord made with Egypt. After three years of negotiation on a plan for reducing Egypt's \$40-billion debt (about \$700 per Egyptian!), the accord, sponsored by the International Monetary Fund, will require reduction of the large wasteful subsidies on electricity, gasoline (it costs fifty cents a gallon), bread, and meat. During much of the 1980's, subsidies amounted to close to eight percent of Egyptian GNP. Wheat sold for a fourth of the world price, damaging farmers' incentive to produce. Economists all agree that the subsidy structure has damaged Egyptian agriculture, and President Hosni Mubarak said, "we must not rely on the outside to provide our food." Still, the consumers are likely to take a harsh view of the removal of subsidies. The last time this was tried in a big way, in January, 1977, over 100 people were killed in rioting in Cairo.

Capital Flight

Many of these Third World investments from borrowings were offset by an outflow of money to safe havens in the developed nations. For example, much of the money borrowed by Latin American debtors quickly ended up in places other than Latin America; economists call this process "capital flight." A lot of it ended up as condominiums in Miami, factories in California, or in Swiss bank accounts. Individuals and firms that could borrow U.S. dollars, supposedly for investment in businesses in Latin America, often took the money and moved it out of Latin America, choosing to make investments abroad, not at home. Trading firms in Brazil, for example, even doctored phoney invoices in order to exchange Brazilian currency for dollars at the Brazilian central bank.

Foreign banks in the 1970s and 1980s were often willing to keep the currency flowing, setting up offices in Sao Paulo, Caracas, and other large Latin American cities to provide private banking services to investors with dollars seeking opportunities abroad. This flight of loaned capital has been particularly frustrating to governments and international lending agencies such as the World Bank. Capital borrowed and reinvested outside Latin America cannot finance new factories and machinery necessary if the economies of Latin America are to grow and become more competitive in world markets.

Figure 1-3 Energy Consumption per Dollar of GNP



Source: **Economic Report of the President** (Washington, D.C.: U.S. Government Printing Office, 1991) 84, 103.

Which Is the World's Largest Debtor Nation?

The problem of debt in the less developed countries is important, but it is informative to learn who the largest debtor is. The dubious distinction is bestowed on none other than the United States, which in 1985 for the first time since World War I went from being a net creditor to being a net debtor nation. This fact is even more surprising given that as recently as 1982 the U.S. was the world's largest *creditor* nation, with *net* international investments \$147 billion larger than foreign investments in the U.S.

Going from Number One to Number One

How did the United States go from being the largest creditor to the largest debtor in the world? The United States did this by running a series of trade deficits in the 1980s. The citizens of the U.S. were importing more goods than they were exporting. Because U.S. citizens exported less than they imported, the U.S. ended up with a trade deficit. This deficit had to be financed by borrowing (by importing capital) from foreigners who invested in the U.S. In other words, the deficit has been matched by a capital inflow. Imported capital (financial borrowings) financed the excess of imports over exports and allowed the U.S. to consume more.

In one sense, the problem is not as serious as it looks on the face of it. The investments made by others in the U.S. have mostly been recent, many in the 1980s. But U.S. investments abroad are, on the average older, and economists argue that in counting their value, we should correct for the inflation which has taken place since the investments were originally made. The U.S. Department of Commerce has done just that, and Figure 1-4 shows that after this correction, the U.S. net indebtedness (what the U.S. owes minus what's owed to the U.S.) drops from \$660 billion to \$463 billion. If you further correct for changes in the values of U.S. stock holdings made in the various countries, the net indebtedness drops to \$281 billion. Such adjustments clearly make quite a difference.

However, \$281 billion is still not small change. As Senator Everett McKinley Dirksen once said, in reference to the federal budget, "Add a billion here, and a billion there, and pretty soon you're into real money." Prof. Robert Eisner, a past president of the American Economic Association, argues:

Whether it's \$800 billion, \$600 billion or \$400 billion is trivial compared to a national wealth of \$20, \$30, or \$40 trillion, depending on how you measure it.

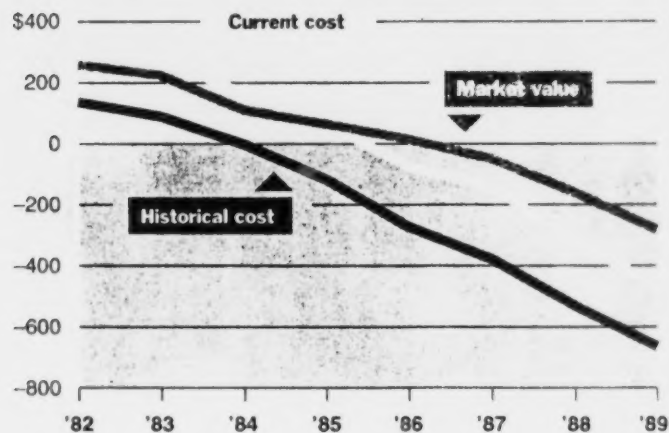
He argues that even if the deficit is large and growing, it may not be particularly important. The additional interest and earnings payments leaving the U.S. will exceed incoming payments by only a few billion dollars, not much in an economy with six trillion dollars worth of economic activity.

Reaching the Limits

A country however, cannot go on indefinitely consuming more than it produces. If foreign lenders were willing to continue to lend forever it could go on, but such unlimited lending is unlikely. If debts grow faster than a country's ability to repay, the risks of additional loans also grow. At higher levels of risk, lenders will begin looking elsewhere for profitable, safer investments. One recent concern among U. S. officials is that many overseas lenders will be attracted to opportunities in Eastern Europe as those countries shift to market economies and seek funds to build new factories and modernize old ones. Germany in particular

Figure 1-4 Re-evaluating International Investments

America's net investment position – American holdings overseas minus foreign investment in the U.S. – based on the value of the investments when they were made (historical cost), or on a re-evaluation in line with current prices for tangible assets (current cost) or on a re-evaluation in line with the performance of domestic and foreign stock markets (market value). In billions.



Source: Commerce Department

Source: Keith Bradsher, "U.S. Gap in World Investing", *New York Times*, June 10, 1991, C2:2-3.

will focus much of its attention on changes in the East. For political and nationalistic reasons, it is obviously drawn to rebuild what was formerly East Germany. Although there are weighty problems with reunification, the former East Germans are a highly educated labor force and that increases the attractiveness of investing in German reunification.

Another important source of competition for investment is the emerging economic power of the Pacific Rim (the subject of a later case study). This region includes the established economic power of Japan and the newly industrialized nations (NICs) of Hong Kong, Taiwan, Singapore, and South Korea. The rapid economic growth in these countries and the potential markets they represent with their new found wealth are attracting investors from around the world.

Such opportunities are competing for the limited funds now borrowed by the U. S. to finance its current trade deficit. When foreign investors reach the point at which they no longer desire to have as many dollar assets, like U. S. Treasury Notes, the value of the dollar itself will begin to fall.

In turn a weaker dollar (more dollars per unit of foreign currency) will make American exports more attractive abroad and imports less attractive. Selling more exports and buying less imports will lessen and perhaps even eliminate the trade deficit. Having come full circle, the U. S. might begin selling more and lending more to other nations than it buys and borrows from them. In that event, the United States could again become a net lender, and pass on the title of "world's largest debtor" to another country.

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(1) Oil:

Anthony Sampson's *The Seven Sisters* is a readable account of the development of Middle Eastern oil by the major oil companies.

Daniel Yergin, *The Prize: the Epic Quest for Oil, Money & Power* (New York: Simon & Schuster, 1991). Yergin is President of Cambridge Energy Research Associates and used to teach at Harvard. The reviews say that it's an exciting book, but overdoes the importance of oil.

(2) Debt:

Developing Country Debt and the World Economy, edited by Jeffrey D. Sachs (Chicago: University of Chicago Press, 1989). Paperback.

The Road to Economic Recovery: Report of the Task Force on International Debt, with a Background Paper by Rudiger Dornbusch (Washington, D.C.: Brookings Institution, 1989). Paperback, \$9.95.

"Privatization" is frequently urged as a necessary step in untangling third-world debt problems. See:

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Case Study 2

Trading for Prosperity: the Gains from International Trade

It is easy to understand why countries would trade, even at initially quite steep terms, with O.P.E.C. With few alternatives for energy supplies, the buyers have little choice. The alternatives for many are import oil or shut down many sectors of production. Because countries keep trading with OPEC, trade with OPEC must be beneficial for the buyers as well as for the cartel. Why else would they have traded at all? But in less obvious circumstances can the same be said of all international trade? Does it benefit both parties in the trade? Because there is a lot of trade; there must be good reasons why. The proportion of total output exported to other countries has grown in all major industrial nations over the last 25 years. In the Netherlands, for example, international trade makes up more than one half of its Gross National Product (GNP), the total output of final goods and services. It is more than one quarter of the GNP in Sweden, Germany, Canada, and the United Kingdom. Although trade is a smaller portion of GNP in Australia and Japan, it is still over ten percent of total output in both of those countries. Even the United States, with its enormous domestic market, has seen the international trade portion of its GNP double to around ten percent during this same twenty-five-year period. About 16 percent of the world's total output is now sold in a country other than the one in which it was produced. This is nearly double the fraction of only 20 years ago. This statement is another way of saying that goods traded have grown twice as fast as output produced, so it would sound as though trade is clearly beneficial.

Looking at the raw statistics of international trade does not completely convey its importance. If countries had to depend on their own ability to produce many of the goods or services they obtain from the world market, it would be much more costly for them to produce the same products for themselves. Each country is different in the amount and kind of resources it has at its disposal in producing goods and services.

Diversity Is the Spice of Life . . . and International Trade

The South American country of Ecuador has both a good climate and suitable land for growing bananas and coffee beans. With these resources, Ecuador can produce coffee and bananas more cheaply than other countries. This is termed an absolute advantage in the production of these two goods.

Alternatively, the United States has equipment and personnel highly adapted to producing computers and airplanes, giving it an absolute advantage over Ecuador and many other countries in their production.

Trade between Ecuador and the United States could benefit both if each traded with the other according to its absolute advantages. If Ecuador can produce more bananas and the U. S. can produce more airplanes, there are more of both commodities if each country specializes in their respective products. But what if one country has an absolute advantage over its neighbors in producing every good? Can trade still benefit both parties? One might be tempted to answer by saying that if one country is more productive producing every good than every other country is, it could never benefit from trade with the other countries. The answer fails to take account of the relative, as opposed to absolute, productive abilities of each country. Regardless of absolute advantages, it is each country's relative comparative advantage which is important for international trade.

Babe Ruth and Comparative Skills

When the great American baseball player Babe Ruth first played for the New York Yankees, he was both the best hitter and the best pitcher on the team. He had an absolute advantage in producing home runs and strike-outs. Like all players, however, if he pitched one game, he had to warm the bench for several days to give his arm a rest. If he was pitching, then he was not hitting. What to do? There were other players who could pitch well, even if not as well as "the Babe," but no one came close to being able to belt so many baseballs out of the park as he did. The team's home runs went down when Babe Ruth pitched, because he batted less. To win more, Babe quit pitching and used his relative advantage in hitting.

The opportunity cost of Babe's pitching--the home runs not hit--was too high to have him pitch. Relative to using other players, the runs he "saved" as a pitcher were less than the runs he gained by hitting. As the manager saw it, let someone else pitch, and leave the home-run hitting to Babe. Even though Ruth had an absolute advantage in both hitting and pitching, his comparative advantage was in hitting. So he never pitched again and hit more home runs instead.

As It Was in Yankee Stadium, So It Is Throughout the World

The law of comparative advantage applies to countries as well as to baseball players. Just as one player has unique skills and cannot transfer them to another, countries have unique people, climate, and natural resources. South Korea's resources are different from those of the United States. South Korea has an industrious semi-skilled labor force. The United States is amply endowed with advanced equipment, scientists, and engineers. It also has vast quantities of land. The United States's resources give it a comparative advantage in making airplanes and growing wheat. South Korea has a comparative advantage in making TV sets and producing cloth. Each country can specialize in production and then trade for goods not produced at home.

If countries specialize according to comparative advantage, more of all goods are produced throughout the world. But increased output is only half the story. There are gains simply from the fact of exchange itself: in voluntary trade, both parties to the exchange gain, even though physical output doesn't increase.

The Gains from Trade

How do both parties gain from trade? Each party places a higher value on what that party received in the exchange than on what he swapped to the other party. It works the same way in international trade. Individuals in Ecuador value an American-made sewing machine more than a crop of bananas in their own banana groves. Americans wanting bananas on their morning cereal value the bananas more than the sewing machine produced in their factories. The only thing that complicates the picture, and then only superficially, is that in the real world people usually exchange currencies for goods. Currency reduces the need to match up that individual who has bananas and wants a sewing machine with the person who wants to trade a sewing machine for bananas. Whether by direct barter or through the use of money, both parties gain from trade.

If Trade Is So Good, Why Is There The Temptation To "Protect" Against Free Trade

Trade across national borders generally takes place between individuals and firms in different countries. But even for trade among individuals, governments are often involved. Most countries impose some restraints on international trade. In some cases imports are subject to tariffs or duties. Sometimes governments impose quotas on imports.

Tariffs and Quotas

A tariff is a tax imposed on a good imported into a country. A tariff can be specific, as when the country collects a fixed amount collected on each unit of the good imported. It can also be *ad valorem*, when it is collected as a percentage of the value of each item imported. A quota is a limit on the quantity or value of a product which may be imported into a country. Governments also impose duties to cover the cost of some government services, such as operating harbor facilities or inspecting imported goods. Frequently, though, tariffs or quotas are imposed to restrict trade. Both tariffs and quotas reduce imports.

If a country can get more goods and services through specialization and trade, why does there seem to be an almost overwhelming temptation for governments to impose protective barriers? The rallying cry for such measures is that they are necessary to protect jobs at home from unfair competition abroad.

The battle cry is often effective because in almost all situations, *the producer interest is concentrated and the consumer interest is diffuse*. It makes a lot of difference to a steel worker whether he keeps his job, and he and his union will go to considerable effort to protect the job. The rest of us all use steel, directly or indirectly, but the cost to us of a rise in the price of any particular product is small. For instance, in 1986, it was proposed to President Reagan that he put quotas on shoes. The whole plan would have cost \$50,000 per job (for jobs paying \$14,000 on the average). The quota would have cost the average American \$5.40 a year, but that wouldn't show up as a separate item in the sticker price of his shoes; the price would just be higher and the buyer probably wouldn't even know why. But even if you did see your family taken for twenty bucks, are you about to march on Washington over twenty dollars? Not likely; but the job-holder is certain to let their Senators and Representatives know about their side of the argument. So there is political pressure from many constituents (voters) for protection, but seldom much of a lobby against it.

Does The U.S. Practice What It Preaches?

For the most part the United States has favored free international trade. In fact, the U.S. is considered to be the world's staunchest supporter of free trade. But it wasn't always so: our development as the world's largest free-trade area took place in the nineteenth century behind high tariff barriers, as Figure 2-1 shows. But since the 1940s we have steadily reduced our tariffs, largely through international negotiation. U.S. tariffs today are much lower than many other countries, as revealed in Table 2-1. Yet even the world's leading free trader is not immune to the temptation of protection from foreign competitors. During the past decade, the United States has pressured trading partners to restrict or limit exports to the U.S. "voluntarily." There are voluntary quotas on U.S. imports of Japanese cars, on textiles from Hong Kong, Taiwan, and China, and on specialty steel (chrome) from Europe. It has also adopted "trigger" prices for steel imports: if U.S. steel prices fall below an established minimum--the so-called trigger price--the

Figure 2-1 U.S. Tariff History



U.S. tariffs have been lower in the post-World War II period than in any other period of comparable length in American history. Throughout its history the United States has alternated between being a high-tariff country and being a modest-tariff country. The average rate of tariff has been lower since World War II than ever before. The rate fell below 10 percent in 1971 and below 5 percent when the Tokyo Round tariff reductions came into full effect in the mid-1980s. These tariffs will not be changed again until the new Uruguay Round of tariff cuts are phased in, sometime in the 1990s. (*Statistical Abstract of the United States*, selected years.)

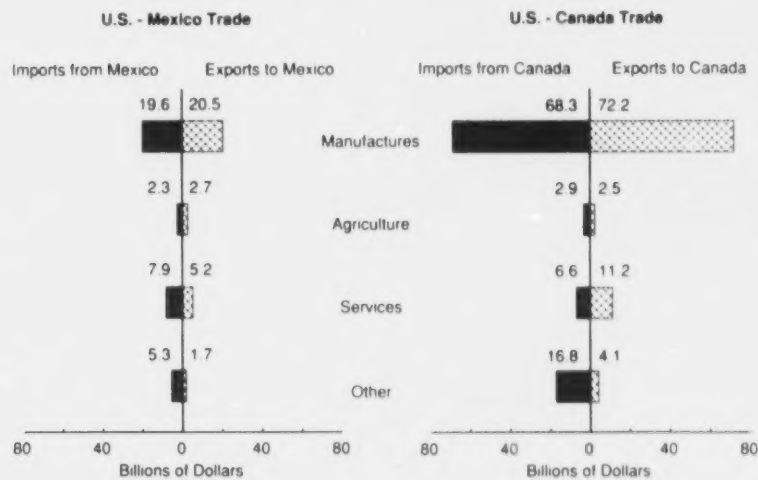
Table 2-1 Nominal Tariff Rates for Selected Countries

Table 1. Who needs imports?				
Nominal tariff rates, 1985. % of value				
	Intermediate goods	Capital goods	Consumer goods	Manufactured goods
Hungary	14.2	15.0	22.6	20.9
Yugoslavia	18.0	20.7	20.0	19.0
Argentina	21.2	25.0	21.9	22.9
Morocco	21.6	18.1	43.0	27.3
Philippines	21.8	24.5	39.0	28.0
Mexico	25.5	23.5	32.2	24.7
Thailand	27.8	24.8	8.5	33.6
Turkey	29.4	54.9	55.3	37.1
Pakistan	75.0	73.8	127.3	89.8
China	78.9	62.5	130.7	91.2
Bangladesh	97.9	80.5	116.1	100.8
India	146.4	107.3	140.9	137.7
Source: World Bank				

Source: *The Economist*, Special survey on India, May 4, 1991.

Figure 2-2 U.S. Trade with Mexico and Canada, 1989

Two-way trade in manufactured goods dominates U.S. bilateral trade with both Mexico and Canada.



Source: Department of Commerce

Source: **Economic Report of the President** (Washington, D.C.: U.S. Government Printing Office, 1991), 254.

government imposes limits on imported steel. For decades the United States has restricted the amount of sugar imported, with the result that American sugar prices are sometimes five to ten times world market prices.

In the late 1980s, the Reagan Administration singled out an American firm for protection: Harley Davidson. Harley Davidson seemed ready to be done in by competition from foreign motorcycle manufacturers. It got its new lease on life from high tariffs on foreign motorcycles. The tariffs raised the cost to foreign competitors of selling in the U.S. especially on imports of heavy motorcycles.

As noted, the problem is that free trade hurts some workers and business owners whose jobs or businesses suffer at the hands of foreign competitors. These individuals naturally want to pressure their government to do something to protect their jobs. Consumers on the other hand, and other workers who benefit from international trade, are much less united by a common bond than are a group of workers from a plant or industry who suddenly find themselves all in the same unemployment boat. The common bond these displaced workers share develops into concentrated efforts for political action: protection from foreign trade.

Sometimes protection is motivated by sentiment or nationalistic spirit. Harley Davidson is an example. It was not a large firm, at least by modern standards. But many considered it an American symbol, invoking images of freedom on the open highways across America. When the failing firm's workers and owners sought help in Washington, D.C. they found a receptive audience.

Free Trade: The Case of Canada, Mexico, and the United States

In 1989, the United States and Canada signed a sweeping trade treaty which many in Ottawa and Washington hailed as an historic breakthrough in trade between the two countries. Others were less enthralled. Norm Smyth for example, is a Canadian wheat farmer who scorned the idea of free trade. Smyth farms a 1,000 acre homestead near Debolt, Alberta, a farming community 560 miles north of the U.S.-Canadian border. The year before the treaty was finalized, Smyth planted 800 of his 1,000 acres in grass and clover, rather than wheat. The reason: anticipation of falling wheat prices when lower-priced U.S. wheat poured across the border into the Canadian wheat market. As shown in Figure 2-2, before the treaty little of the U.S./Canada trade was in agriculture. Smyth knew it was soon to change.

Other Canadians heartily embraced the trade treaty. Hydro-Québec, the province's government-owned electrical utility, was already supplying 16.4 billion kilowatt-hours of electricity to markets in the Northeastern United States--worth \$351.8 million in 1987 alone. Hydro-Québec executives had been worried that Washington would restrict the firm's access to customers in the U.S., but the trade agreement banned any restrictions on the export of Canadian energy supplies.

South of the border, in Peoria, Illinois, the treaty's prospects also pleased some Americans. Salespeople with the tractor equipment manufacturer Caterpillar Inc. welcomed the clause in the treaty which would phase out the ten-percent Canadian tariff on earth-moving equipment. Said William Lane, a Caterpillar representative, "It will definitely make our products more competitive in Canada." Manufactures were already a big part of the U.S./Canada trade picture (see Figure 2-2).

Preceding the treaty's enactment, U.S. exports to Canada already had topped \$61 billion, over 25 percent of total U.S. exports. Canada's exports to the U.S. were more than \$73 billion in the late 1980's, accounting for almost 80 percent of Canada's total exports. The U.S.-Canadian trade treaty will remove tariffs and duties over ten years on what already amounted to almost \$150 billion worth of trade between the two countries. The treaty is likely to expand the world's largest two-way trading relationship because

by 1999, there will be no more tariffs on goods moving between Canada and the U.S. The treaty also relaxes restrictions on investments across the border. U.S. firms will no longer need the Canadian government's approval before establishing *new* businesses in Canada. Government approval, however, will be required for investments in the 600 largest *existing* Canadian businesses. One other exception to the relaxing of trade restrictions is the Canadians' insistence on maintaining exclusive ownership of energy resources and cultural industries such as motion pictures, newspapers, and broadcasting.

The next thing on the U.S. agenda is a similar free-trade plan with Mexico, proposed by President Bush and grumbled at by interests in Congress. The gains appear to be substantial to both countries, however. In the words of the *Economist* (20 April 1991, 24):

Mexico's average tariff is higher than that of the United States (about 10%, compared with about 4%), and Mexico needs to build up its stock of capital goods, most of which it buys from the United States. So free-trade agreement could be expected to increase the United States's bilateral surplus with Mexico and hence increase American jobs.

Figure 2-3 indicates one expert's predictions about employment gains and losses. Some industries will do well and others suffer, in both countries. The *political* information in the figures is also important: U.S. citizens whose jobs are likely to be lost know exactly who they are; those making apparel or growing avocados. But the people who will get jobs because of expanded trade don't know who they are. Their jobs don't yet exist, and so they aren't putting pressure on Congress.

This points up an aspect of American trade policy which has never received adequate attention: retraining and re-employment assistance. If there are gains to the nation as a whole from liberalized trade, as economists insist, then there is a surplus out of which to finance the effort to get new jobs for the displaced. It's an especially difficult problem with industries which are among those most likely to be hit by competition from abroad: old-line industries like steel and shoes.

Pressure from Congress about the difficulties of job loss finally led President Bush in early May, 1991 to consider "adequate assistance and effective retraining for dislocated workers as a part of the treaty package."

The environment is another concern: "green" factions in the United States have argued that free trade with Mexico would merely mean that manufacturers would take advantage of Mexico's laxer pollution policies. Americans would in effect be exporting their pollution to Mexico and giving themselves the illusion of cheaper products, the cheapness at the expense of the Mexican environment. Mexican officials say that their rapidly increasing enforcement efforts (five-fold in the last two years) will prevent this from happening, and that "any company seeking to relocate to Mexico would be told that it would have to comply with emission standards at least as strict as where it came from."

Figure 2-3 U.S. - Mexico Trade Pact: The Effects



KNIGHT-RIDDER TRIBUNE NEWS

Source: San Francisco Examiner, 5 May 1991, A-13

Notes:

The figures on the effects of proposed protection in the shoe industry are taken from Susan Liebler, Commissioner of the Federal Tariff Commission, in *Business Week*, 15 July 1986, 20.

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On protectionism, see:

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Case Study 3

The Paper Chase, International Style: The Foreign Exchange Market.

With few exceptions, such as Liechtenstein, almost every country has its own currency. England has the pound sterling, France the franc, Japan the yen and Mexico the peso. Each country's citizens use its own currency to carry out local transactions.

Exchanges between buyers and sellers in different countries, however, are preceded by a special kind of exchange: the exchange of one nation's currency for another's. An American car distributor selling Toyotas will have to exchange dollars for yen to pay for deliveries from a Japanese auto manufacturer. A British investor buying real estate in Florida will have to convert pounds sterling to dollars before buying land or buildings there. The price of one currency expressed in terms of another currency is called an exchange rate. The exchange rate of the dollar relative to some other currency is the number of units of that other currency a dollar can buy. Some sample rates are given in Table 3-1. On April 19, for example, the price of a dollar in terms of yen was 137.65; that is, people could exchange 137.65 yen for a dollar in New York. These exchanges of currencies occur in the foreign-exchange market.

Like other markets, the foreign-exchange market is not one organized exchange operating in a single place, such as a building in New York or a single well defined section of London. Small amounts can be exchanged in many places, such as major hotels, and large amounts can be exchanged usually among large banks, in various locations in many world cities: Singapore, Tokyo, Geneva, London, New York. Trade can be made by telephone or computer systems. As these systems have become more sophisticated and wide-spread, the quantity and speed of currency exchanges have increased dramatically. As in all areas of economics, but especially so in the international arena, technological advances change not only the products and services exchanged, but the means of exchange as well. These days there is a foreign-exchange market open somewhere in the world 24 hours a day. The increased ease of executing foreign exchange transactions ties the world together more closely in economic and other ways.

A Weak or Strong Dollar? Intervention

In September 1987, the Federal Reserve (the central bank for the United States) held about \$9 billion in Japanese yen, German marks, British pounds, and other foreign currencies. From September 1987 to January, 1988, the dollar fell in value from about 143 yen per dollar to about 120 yen. Many individuals and government officials feared that the dollar was getting too weak. They urged U.S. officials to intervene and use some of the Federal Reserve's foreign currency holdings to buy dollars and bolster the value of the dollar. Others welcomed the fall, seeing benefit from a weak dollar. There will always be discontent political interests about the exchange rate, because when the dollar "weakens" U.S. exporters are benefited and importers hurt. As the dollar weakens, it takes less foreign currency to buy a given value of U.S. exports and more dollars for the same value of imports.

What does it mean to say that the dollar is "weakening"? Weakening against what? If the value of the dollar falls, that is weakens, it takes more dollars than before to purchase the same amount of another currency, like the pound. For example, if the exchange rate, which had been one dollar for one pound, changed so that one pound cost two dollars instead, the dollar would have become weaker in comparison

Table 3-1 The foreign-exchange report for the New York market for a typical day.

CURRENCY TRADING

EXCHANGE RATES

Thursday, April 18, 1991

The New York foreign exchange selling rates below apply to trading among banks in amounts of \$1 million and more, as quoted at 3 p.m. Eastern time by Bankers Trust Co. and other sources. Retail transactions provide fewer units of foreign currency per dollar.

Country	U.S. \$ equiv.		Currency	
	Thurs.	Wed.	Thurs.	Wed.
Argentina (Austral) ...	0001047	0001048	9555.02	9545.63
Australia (Dollar)	.7770	.7789	1.2870	1.2829
Austria (Schilling)	.08337	.08318	12.00	11.74
Bahrain (Dinar)	2.6532	2.6532	.3769	.3769
Belgium (Franc)				
Commercial rate	.02852	.02924	35.06	34.21
Brazil (Cruzireiro)	.00406	c.00407	246.59	c245.41
Britain (Pound)	1.7535	1.7875	.5703	.5554
30-Day Forward	1.7453	1.7790	.5730	.5621
90-Day Forward	1.7295	1.7630	.5762	.5672
180-Day Forward	1.7100	1.7425	.5848	.5739
Canada (Dollar)	.8681	.8692	1.1520	1.1505
30-Day Forward	.8654	.8664	1.1555	1.1542
90-Day Forward	.8610	.8620	1.1614	1.1601
180-Day Forward	.8547	.8560	1.1700	1.1682
Chile (Peso)	.003032	.002943	329.84	329.83
China (Renminbi)	.189771	.189771	5.2695	5.2695
Colombia (Peso)	.001698	.001735	588.90	576.23
Denmark (Krone)	.1534	.1568	6.5210	6.3790
Ecuador (Sucre)				
Floating rate	.000966	.000966	1035.00	1035.00
Finland (Markka)	.25013	.25513	3.9980	3.9195
France (Franc)	.17384	.17748	5.7525	5.6344
30-Day Forward	.17340	.17699	5.7670	5.6499
90-Day Forward	.17254	.17612	5.7959	5.6781
180-Day Forward	.17136	.17487	5.8355	5.7186
Germany (Mark)	.5849	.6002	1.7040	1.6660
30-Day Forward	.5855	.5997	1.7080	1.6702
90-Day Forward	.5825	.5958	1.7166	1.6784
180-Day Forward	.5786	.5914	1.7284	1.6908
Greece (Drachma)	.005411	.005525	184.80	181.00
Hong Kong (Dollar)	.12839	.12839	7.7890	7.7890
India (Rupee)	.05061	.05061	19.76	19.76
Indonesia (Rupiah)	.0005222	.0005222	1915.01	1915.01

Ireland (Punt)	1.5680	1.6029	.6378	.6239
Israel (Shekel)	5001	.4511	1.9996	2.2167
Italy (Lira)	.0007930	.0008084	1261.00	1237.01
Japan (Yen)	.007265	.007350	137.65	136.05
30-Day Forward	.007253	.007338	137.88	136.28
90-Day Forward	.007233	.007318	138.25	136.65
180-Day Forward	.007213	.007297	138.63	137.04
Jordan (Dinar)	1.5029	1.5029	.6654	.6654
Kuwait (Dinar)	2	2	2	2
Lebanon (Pound)	.001060	.001060	943.00	943.00
Malaysia (Ringgit)	.3657	.3662	2.7345	2.7310
Malta (Lira)	2.1153	2.1153	.3210	.3210
Mexico (Peso)				
Floating rate	.0003349	.0003349	2986.00	2986.00
Netherlands (Guilder)	.5206	.5321	1.9210	1.8795
New Zealand (Dollar)	.5910	.5915	1.6920	1.6906
Norway (Krone)	.1508	.1543	6.6300	6.4875
Pakistan (Rupee)	.0435	.0435	23.00	23.00
Peru (New Sol)	1.6920	1.6467	.59	.60
Philippines (Peso)	.03676	.03676	27.20	27.20
Portugal (Escudo)	.006915	.006879	144.62	145.38
Saudi Arabia (Riyal)	.26660	.26660	3.7510	3.7510
Singapore (Dollar)	.5692	.5703	1.7570	1.7535
South Africa (Rand)				
Commercial rate	.3664	.3680	2.7293	2.7173
Financial rate	.3076	.3033	3.3050	3.2970
South Korea (Won)	.001279	.001279	725.75	725.75
Spain (Peseta)	.005488	.005713	105.40	102.95
Sweden (Krona)	.1430	.1461	4.1350	4.0195
Switzerland (Franc)	.6873	.7035	1.4550	1.4215
30-Day Forward	.6858	.7020	1.4581	1.4244
90-Day Forward	.6834	.6995	1.4632	1.4295
180-Day Forward	.6807	.6967	1.4690	1.4253
Taiwan (Dollar)	.037296	.036684	26.81	27.26
Thailand (Baht)	.03926	.03926	25.47	25.47
Turkey (Lira)	.0007677	.0007677	3736.01	3736.01
United Arab (Dirham)	.2723	.2723	3.6725	3.6725
Uruguay (New Peso)				
Financial	.000544	.000544	1838.23	1838.23
Venezuela (Bolívar)				
Floating rate	.01854	.01826	53.94	54.75

SDR 1.35884 1.36470 73592 73276
ECU 1.27381 1.27304

Special Drawing Rights (SDR) are based on exchange rates for the U.S., German, British, French and Japanese currencies. Source: International Monetary Fund.

European Currency Unit (ECU) is based on a basket of community currencies. Source: European Community Commission.

2-Not quoted c-corrected.

Source: Wall Street Journal, 19 April 1991, C10.

to the pound. Thus when we say that the dollar is weaker, we mean simply that it buys fewer pounds, Japanese yen or German marks. The dollar can, of course, weaken with respect to the pound and strengthen relative to the mark at the same time. Figures 3-1 and 3-2 show the movement of the dollar exchange values over a considerable period, and the overall rise and fall of the dollar against a batch of currencies, including several key ones.

If the U.S. Treasury and the Federal Reserve think the current exchange rate represents too weak a dollar relative to the Japanese yen, they can attempt to strengthen the dollar by selling some of the yen they hold in reserve and buying dollars held by business, banks, and private individuals. In this way, the supply of yen increases. As always, if the supply of any commodity increases--in this instance yen--the price of that item falls...the yen falls relative to the dollar, or conversely stated, the dollar rises relative to the yen.

Reducing Dollars in Circulation

Another perspective of the same action is to note that by selling yen for dollars, the U.S. is buying dollars and taking them out of the flow of exchange. By buying dollars and holding them in Federal Reserve accounts, the U.S. monetary base falls. This monetary base is the sum of the nation's currency in circulation--money held in purses and wallets and in checking accounts--plus that held in the vaults of commercial banks. Such a fall in the monetary base and the amount of dollars in circulation strengthens the dollar exchange rate. It also puts some downward pressure on domestic prices, because the amount of dollars people have to spend and private banks have to lend is less.

Currency Intervention Is Worldwide

Although the above example focuses on actions of the U.S. Treasury and Federal Reserve, the process of currency intervention is the same the world over. Every nation's central bank can intervene to strengthen or weaken its own currency. The only limitation to a central bank's ability to intervene in currency markets is the amount of reserves of foreign currency it has on hand, or the amount it can borrow elsewhere.

Currency Intervention's Limits

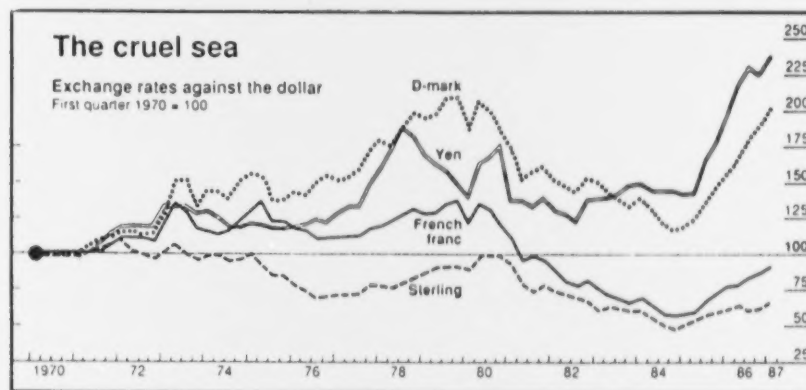
What cannot be done in the market for goods and services also cannot be done by intervention in international money markets. The real value of the yen, or any currency is directly determined by the demand for the products sold by individuals wanting to be paid in yen. Thus, if Sony is the first to market a highly popular product, such as the Walkman cassette player, and asks for payment in yen, then individuals holding dollars, pounds, or marks, who want the cassettes must first convert their currency into yen. (Note that it amounts to the same thing if Sony accepts dollars and converts them into yen itself).

If Americans seek to exchange dollars for yen, the American reserves of yen decrease. The same occurs in England if the central bank there, the Bank of England, exchanges its reserves of yen for pound notes. Banks in Japan also may be involved, taking in dollars and pounds in exchange for yen. The foreign reserves (dollars and pounds) of Japan have thus increased; Japanese banks now hold more pounds and dollars. The foreign reserves of yen held by the Americans and Japanese have dwindled. There was nothing mysterious at work in the change in these countries' positions regarding paper assets: currency

Figure 3-1 How the Mighty Has Fallen



Figure 3-2 The Cruel Sea



Source: Figure 3-1 *Wall Street Journal*, 22 October 1990, A6. Figure 3-2 *Economist*, 4 April 1987, 81.

holdings. They have only reflected the straightforward proposition that when one country sells its products to another country, its reserve holdings of foreign exchange go up, and their own currency reserves decline.

How Low Should It Go?: A Country Can Benefit if Its Currency Is Weak

Nationalistic pride aside, sometimes a country's weakening currency is a source of rejoicing rather than concern for the country's citizens. How can this be when the term "strong" makes it seem that citizens should be pleased if their country's currency is strong? There are two reasons. First, when a country's currency weakens, the foreign prices of goods it exports fall, making the goods more attractive to foreign buyers. This boosts exports and business for exporting firms. Second, when it takes more dollars to buy imports from foreigners, U.S. citizens import less; American buyers are less well off.

Let's recall world currency markets during the tumultuous spring of 1989. Political scandal rocked Japan. The world witnessed the shocking events in Beijing as Chinese troops stormed against dissident students in Tiananmen Square. Wealthy investors in Hong Kong feared what might happen when China assumed direct rule there. The United States quarreled with one of its staunch post-war allies, West Germany, over NATO policies. These events startled investors throughout much of the world. Many sought a safe haven for their wealth in what they perceived to be a politically stable United States. To move their wealth, people sold assets and converted their own currency holdings into dollars. The great demand for the dollar that occurred caused a rise in its price: it soon took more units of yen, marks, or pounds to buy a dollar. After beginning the year at 123.8 the dollar hit highs of 151.8 yen per dollar and 2.05 marks per dollar by mid-June, 1989. It had begun the year at 123.8 yen and 1.77 marks. After conditions overseas became more stable and returned to normal, the dollar again weakened. By mid-July, the dollar had fallen to around 141 yen and 1.90 marks. U.S. businesses sighed a collective sigh of relief. Why?

First, as noted above, a weaker currency means goods are more attractive to overseas buyers, selling as they do for a cheaper foreign price. For example, during June of 1989, a West German firm wishing to purchase an \$800 piece of electrical testing equipment from Riser-Bond Industries in Aurora, Nebraska, would have needed to convert 1,600 marks into dollars. After the July drop in the dollar, the German firm only needed 1,500 marks to exchange for 800 dollars. Either transaction would have been worth \$800 dollars to the American firm, but the same piece of equipment was cheaper, and thus more attractive, to the German firm after the dollar weakened.

Second, for the U.S. firms selling goods abroad, the weaker dollar meant that they could exchange their foreign earnings for a larger number of dollars. At the dollar's peak levels, every 200 marks earned by the U.S. firm, Koss Corporation, selling headphones in West Germany represented \$100. After the dollar's fall, the same sale would have brought in \$109 after the exchange of marks into dollars.

Even firms that do not export goods often may welcome a weakening of their country's currency if they compete in home markets against foreign firms. This is because if the home currency weakens, foreign goods become more expensive to consumers in the home markets. Conversely, if the dollar strengthens, foreign imports become less costly and are harder to compete against. For example, consider an American firm, Union Camp Corporation, competing against a German firm which sells the same industrial chemical products. At an exchange rate of 1.77 marks, the German firm's product priced at 1,000 marks would cost \$565. If the dollar strengthens to say 2.05 marks, the German firm's product at the same price (1000 marks) would cost only \$488. The stronger dollar makes it harder for Union Camp to compete in its own home market. A weaker dollar helps it.

Who Pays When the Currency Weakens?

There are disadvantages, however, to a weaker currency. Imports cost more. Foreign investors find it less attractive to put their wealth to work in a country whose currency is weakening. The profit on building factories, for example, converts into fewer units of the investors' home currency. The investors will look to other countries for investment opportunities. There is also the danger that if the currency falls too low, too fast, it could create fears akin to a run on a bank; wide-spread fear of further weakening might cause panicky investors to convert into the currencies of other countries, leaving the home country short of investment resources. Many developing nations have faced this problem.

Reading Suggestions:

Robert Aliber, *The International Money Game*, 5th ed. (New York: Basic Books, 1987). \$13.95. Readable.

"Free Exchange Rates," Chapter Nine of Milton Friedman's book, *Dollars and Deficits* (Englewood Cliffs, N.J., Prentice Hall, 1968) is still worth reading.

"Intervention: Simple but Secret," *The New York Times*, 8 January 1988, 27.

"The Dollar Turns: a Six-Year Decline Seems to be Over," *Economist*, 23 March 1991, 85.

You can follow foreign-exchange rates in the *Wall Street Journal* five days a week, in the third section.

Case Study 4

Selling Our Assets: What Is Foreign Direct Investment and Why Do So Many Seem To Fear It?

The stories are becoming more and more familiar. A Japanese firm opens an automobile plant in Tennessee. Demonstrations in front of the plant follow, complete with workers smashing a Japanese car with sledge hammers and burying it in a mock grave. Another Japanese firm buys Columbia Pictures, and British investors buy up U.S. hotels. Commentators take to the airwaves complaining that America must preserve its culture from foreign domination.

Is foreign investment in the U.S. good or bad? One thing is sure, foreigners are buying "pieces of America"--or at least American assets--at an astonishing rate. Swiss business interests bought Carnation Foods, producer of canned concentrated milk, for three billion dollars. German investors bought Doubleday publishers for five billion. Japanese investors bought Rockefeller Center. Canadians bought Allied Stores, which owns Brooks Brothers, for \$3.5 billion. British interests bought Smith and Wesson gun manufacturers for \$1.1 billion. British Petroleum bought Sohio gasoline stations for \$7.6 billion. Chesebrough-Pond's, the makers of Q-tips, was bought by a Dutch and British firm for \$3.1 billion. The Japanese now own the Dunes Hotel and Country Club, one of Las Vegas's best known gambling casinos. Tycoons such as Britain's Gordon White, Germany's Mark Wossner, Australia's George Herscu, and Japan's Shigeru Kobayashi are prowling the corporate corridors of the United States looking for financial prizes. Figure 4-1 shows the composition and breakdown of foreign investors in the U.S. as of 1988, and the increases in foreign ownership in key industries in the last decade are shown in Figure 4-2.

What is causing this invasion of foreign capital into the United States? Prior to the mid-1980s, it was the Americans who were the major buyers of foreign assets. What has happened since then to reverse the pattern? And more important, who gains and who loses from foreign direct investment? Do there have to be any losers?

Defining Direct Foreign Investment

Foreign direct investment (FDI) occurs whenever individuals or organizations of one country acquire the rights to physical assets in another country. If a French business firm establishes a subsidiary in the United States by buying a U.S. factory or plant, or by having one built, the French firm has made a direct foreign investment. Foreign direct investment can also involve buying shares of stock in a U.S. company. If a Japanese firm buys shares in an American entertainment conglomerate, as Sony did with MGM, the Japanese firm has made a foreign direct investment in the United States.

Is It Ever Too Much?

In the past, developing countries have often complained that foreign acquisitions are an unwelcomed intrusion into their internal affairs. The foreign purchase of assets, they claimed, would take away a country's control of its future and destiny. Industrialized nations, especially the United States, always countered that investments are beneficial to the country whose assets are purchased. Now that the United States is the recipient of such generosity, many U.S. citizens call on Congress to enact laws limiting the sale of American assets. Who is right in the debate over FDI?

Figure 4-1 The Foreign Owners

The Foreign Owners

Total foreign direct investment in the United States at the end of 1988 was \$304.2 billion.

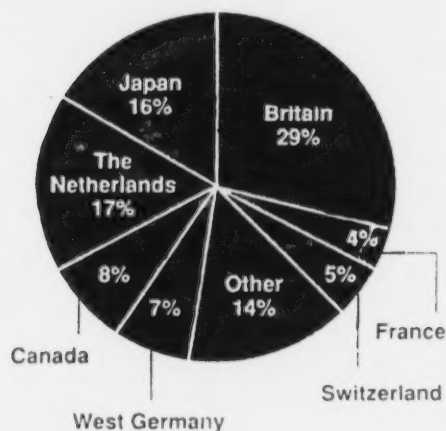
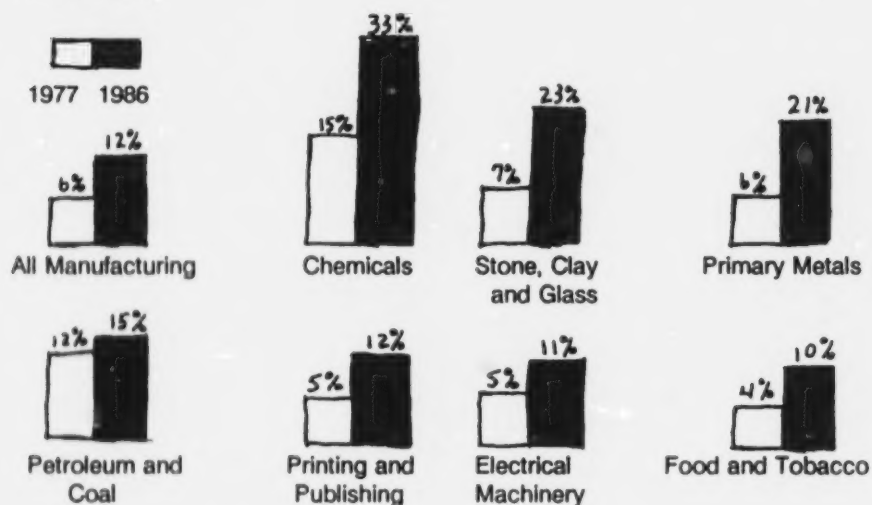


Figure 4-2 Growing Foreign Ownership of U.S. Industry

Growing Foreign Ownership of U. S. Industry

Dollar value of assets of U.S. affiliates of foreign manufacturing companies as a percent of all U.S. businesses in manufacturing in 1977 and 1986, the most recent year available.



Source: Jonathan P. Hicks, "The Takeover of American Industry", *New York Times*, 28 May 1989, 1 & 8.

While each country's first choice might be to make its own investments, the nation's own savings may not be enough for all the investments that are profitable. Savings are necessary for investments for building factories and equipment. These investments increase a nation's ability to produce goods in the future. But higher savings within a country leave less for consumption. If a country does not hold down its consumption adequately, it must make up for it with FDI if it wants to invest more at home. The United States has had a falling savings rate for nearly twenty years. Both public and private savings have been falling. Savings have been falling steadily in most of other advanced economies as well. Indeed even Japan's rate has been falling, although its rate of private savings is still three times ours.

If a nation consumes more than it is producing at home, some of that consumption must be imported. In that case, the money to buy foreign goods must come from selling assets at home—that is, by having foreigners make direct foreign investments in your own country or "portfolio" financial investments there.

Fears and Concern

It is understandable that some countries might fear FDI if it imposes unwanted, foreign cultural values on its citizens. This was certainly a major concern when Coca-Cola became an international beverage and spread around the world. Some people called it the Coca-Cola-colonization of the world. Canadians have expressed worries about U.S. influence on their entertainment industry and their special national values now that Canada and the U.S. have opened free trade across their borders. Others fear that despite FDI, foreign firms may choose to shift the basic research and technology development from the purchased firm to their own country and then simply assemble the products in another country. In that case, the key benefits from long-run improvements in productivity would transfer back to the foreign owners. The **Economist** has commented on this fear:

Concern over the ownership of assets rather than their location is absurd.... Inward foreign investment is, after all, investment, and often of the especially valuable sort that brings in new products and skills. The charge that foreign owners "hollow out" whatever they buy by closing research and development facilities and so on is, on the evidence, simply false.
[8 June 1991, 15:2]

One thing is clear, at least in the short run, any country's consumers are better off if there are more FDI and international trade. Increases in productivity, even if occurring in a foreign country, increase the availability of goods at home and in international markets as well. And, as more large trading blocks develop, what was once "foreign" becomes less foreign and more internal in many respects. Consider the European Community, for example.

FDI and Europe After 1992

In principle at least, the twelve nations of the European Community (EC) will become a unified market on December 31, 1992. The intent is to remove all barriers to the movement of goods, capital and labor within the EC after 1992. What does this unification drive mean for direct foreign investment in Europe by the non-European nations?

First, French or Italian investments in Germany are still technically foreign, but for all practical matters they are just like investments at home in France or Italy. Furthermore, the unification of Germany

eliminates West German investments in what was formerly foreign East Germany. The European Community will be more closely bound together, more like the United States (and Canada) in economic dealings.

Second, the EC will continue to attract a great deal of foreign investments, partly because of opportunities there, and also because capital supplies in the EC will flow partially at least to the new independent countries of Eastern Europe (Poland, Czechoslovakia, Hungary, and others). Who will likely invest in the EC? Figure 4-3 shows the amounts of recent FDI as sources and recipients. As shown, large providers (sources of capital) are typically also large recipients. Although the wealthier of the oil-exporting countries, such as Saudi Arabia, the United Arab Emirates and, until recently, Kuwait, have been making considerable investments in Europe since the mid-1970s, the Persian Gulf War has greatly reduced that flow. The other developing nations are not in a position to make any major FDI; they are absorbing it. This leaves only Japan and the United States as likely candidates for significant FDI in Europe after 1992.

The United States is likely to benefit from opportunities for FDI in the new Europe. In fact, most existing firms operating in more than one European country are American already. Most of these firms, such as giant IBM, have operated across national European boundaries for a long time. Many moved into Europe immediately after World War II at a time when Europe was still rebuilding itself and in desperate need of FDI and reconstruction aid. Consequently, more FDI from the U.S. is a natural extension of historical trends.

The forecast for FDI from Japan in the EC is more difficult to make. Whether for reasons of cultural and ethnic fears, or for purely economic reasons, many of the recent restrictions on trade from within the unified EC are aimed at the Japanese. Some argue that Japan's (real or apparent) protectionism in its own markets justifies these restrictions. Alternatively, a capital hungry Europe may prefer Japanese investments there rather than less capital overall. Though only a guess, it seems likely that sizable amounts of Japanese capital will find their way to the growing EC.

FDI in America

What is the future of FDI in America? To make any plausible forecasts requires first a reasonable explanation of why there has been such a dramatic turn-around of investment direction, from out bound to inbound.

The usual explanation is that beginning with the enormous federal budget deficits and trade deficits of the 1980's, Americans consumed too much and produced too little. To finance their consumption from abroad, the argument goes, Americans have had to sell assets, everything from real estate to whole companies. But others contend that this deficit in foreign trade (buying goods from abroad by selling assets at home to foreigners) is a symptom rather than cause for such one-sided FDI.

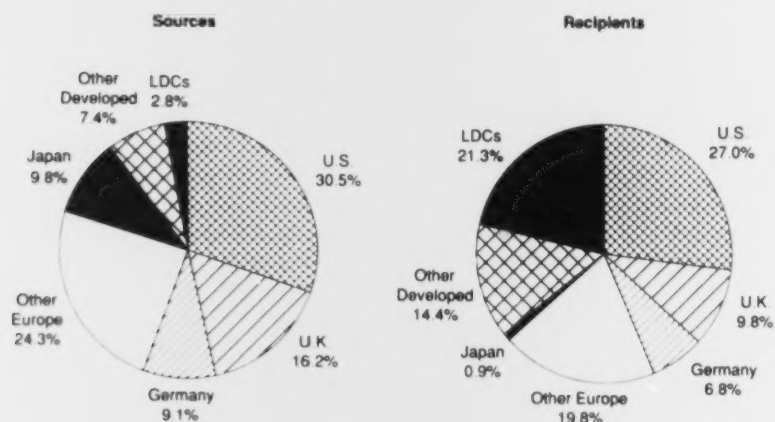
This contention is based on a second argument that foreigners must sell more goods to Americans than they buy from Americans because what they really want is not American goods but investments in the United States. Selling more goods to Americans provides foreigners with dollars with which to buy American assets. The reason for this strong desire for American assets is the political stability of the U.S. itself, and foreign preferences to keep their savings in a safe place (the U.S.).

If the second argument is correct, the U.S. trade deficit (imports-exports) and much FDI could continue for a long time, as foreigners seek a safe haven for investments.

A number of events recently suggest this trend may continue: ethnic violence in the Soviet Union; the possible reversal of liberalization in the Soviet Union; chaos in Eastern Europe as old-line communist

Figure 4-3 World Stocks of Foreign direct Investment, 1988

Many countries that provide large amounts of foreign direct investment are also large recipients. Indeed, the United States is both the largest source and the largest recipient.



Note: Data are based on world stocks of direct investment.
Source: Department of Commerce.

Source: **Economic Report of the President** (Washington, D.C.: U.S. Government Printing Office, 1991), 257.

governments fall, creating a vacuum in which no clear authority has yet been established; chaos in the Middle East. There is also the coming absorption of Hong Kong into China, which is likely to lead to continued capital flight to a safe haven like the U.S.

Globalization

The mere growth of world trade blurs the distinction of FDI. As overall trade expands, more and more products become part of a final product. For example, IBM may market a computer with intermediate inputs made in several different countries. A recent letter to the **New York Times** pointed out the implications:

Take Texas Instruments, which is a major producer of memory chips in Japan. More than one-half of this output returns to the United States in the form of imports from Singapore. Would we count this as an export of Japan, Singapore, or the United States? [**New York Times**, 29 April 1991, F11.]

Beyond the market for intermediate inputs, the trend of globalization is occurring at every level. A handful of auto plants operating internationally is likely to dominate automobile production in the future. The market for financial capital is already worldwide. Financial markets in New York or London are no longer distinct. Today as the financial market closes in Tokyo, it opens in London. From New York to London to Tokyo and Hong Kong, communication technology has linked the financial markets into a unit which operates around the clock. Globalization has also shifted long-standing positions in world markets. For example, the world's largest banks are no longer controlled by Americans in New York or San Francisco but by the Japanese in Tokyo. The globalization of world markets is likely to provide a powerful stimulus to FDI in most parts of the world.

Figures 4-4 through 4-6, and Table 4-1 show that the increasing FDI in the United States has been part of a global wave of FDI. It is not an isolated case. The five big economies--including the U.S., Germany, France, Japan, and the United Kingdom--have all been increasing their FDI at incredible rates, the U.S. faster than Germany and the U. K., both of whom have doubling times of about four years for their FDI. The Japanese are finding investment outlets at the fastest rate.

Finally the wave of investment into the United States may be slowing. Figure 4-7 from the **Washington Post** shows the recent fall in the flow. The slowing of the flow may simply reflect a change in the exchange rate of the dollar for other currencies. The dollar has been strengthening in 1991, with the result that investments here now cost a little more to foreigners and are therefore less attractive to them.

Figure 4-4 U.S. outflows of FDI

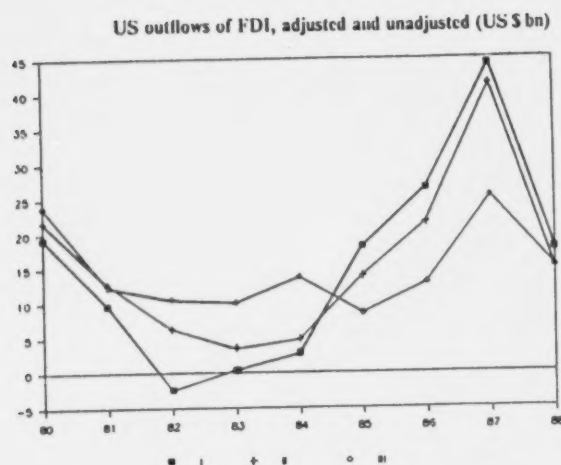


Figure 4-6 FDI outflows from the G-5

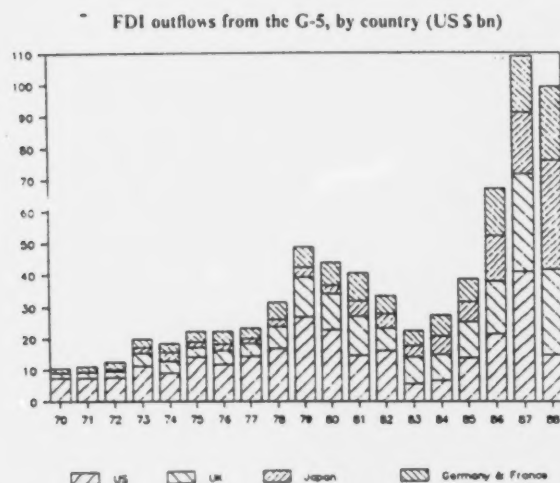


Figure 4-5 Aggregate outflow/inflows of FDI

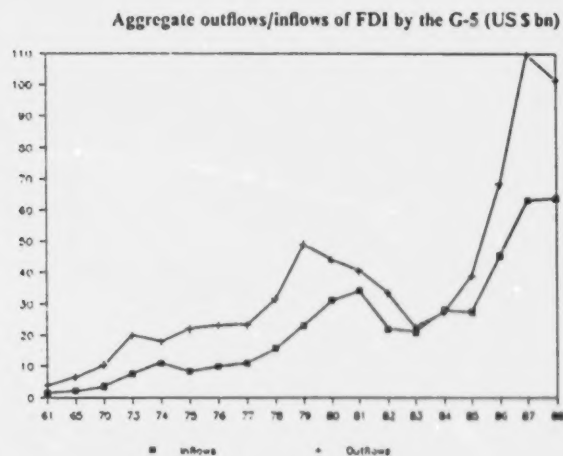


Table 4-1 FDI outflows by the G-5

FDI outflows by the G-5
(compound annual growth rates, valued in domestic currency)

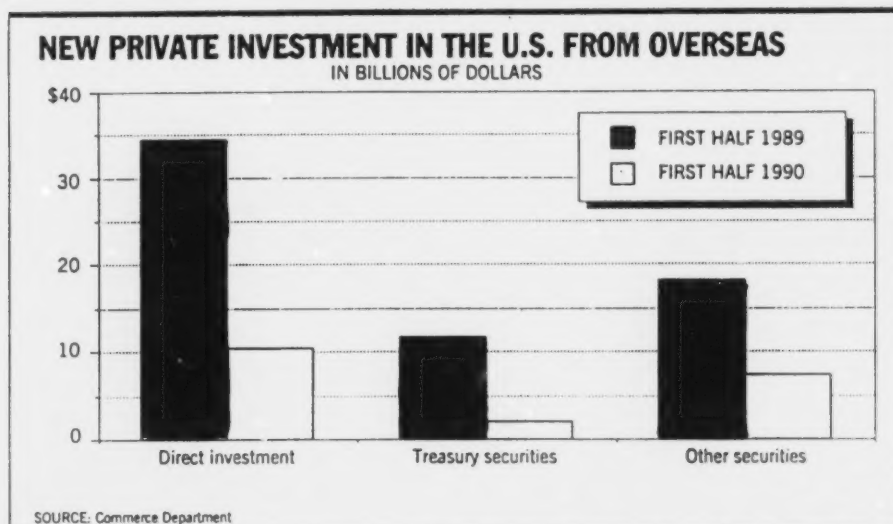
	FDI flows 1983-8		FDI stock* 1988 (\$ bn)
	Nominal (%)	Real (%)	
United States	24	20	324
United Kingdom	22	16	184
Japan	39	37	114
Germany	18	15	78
France	39	32	57

*For consistency across countries, the stock is taken to be the cumulative FDI outflow over the period 1961-88.

Source: DeAnne Julius, *Global Companies & Public Policy: the Growing Challenge of Foreign Direct Investment* (New York: Council on foreign Relations Press, 1990), 21, 28, 111.

Figure 4-7 New Private Investment in the U.S. From Overseas

The flow of foreign capital to the U.S. slows to a dribble



BY CAROL PORTER—THE WASHINGTON POST

Source: John Burgess, "The Buck Stopped Before Here", *Washington Post National Weekly Edition*, 15 October 1990, 20.

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DeAnne Julius, **Global Companies & Public Policy: the Growing Challenge of Foreign Direct Investment** (New York: Council on Foreign Relations Press, 1990). Paperback, \$14.95.

Thomas Ormestad, "Selling Off America," **Foreign Policy**, Fall 1989, 119-140. "Foreigners with fistfuls of devalued dollars now comb America for banks, business, factories, and securities." Is the appeal of this first sentence to the rational person? Or is the author trying to con you? Rewrite the sentence to have the opposite effect on the reader. Try the **Wall Street Journal** headline: "Japanese Bankroll Small U. S. Firms." (2 November 1989).

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"America's New Rush to Europe," **Business Week**, 26 March 1990, 48-49.

Case Study 5

Migration and Immigration

Migration has become an important international economic issue, in two different ways. The first is migration in search of economic opportunity. These are economic forces pulling people to the destination country. Second is the migration of refugees, when political dissidence often combines with a search for new opportunity. The number of people involved is large. Pakistan alone is currently host to three *million* Afghan refugees, Turkey and Iran have millions of Kurds and the United States is estimated to have three to four million illegal migrants.

The United States is the focus of this Case Study because the U.S. has normally absorbed up to half of the world immigration every year. Figures 5-1 and 5-2 show the large magnitude and waves of immigrant arrivals for over one hundred years. Immigration is also historically important in Germany, where a program of guest workers ("Gastarbeiter") ended up with Germany having a substantial (largely Turkish) Islamic minority. Although it was not the immigrants intention to stay, they did. More recently in the Persian Gulf, a large portion of the work force have been migrant: Egyptians number in the millions, in addition to Palestinians, Pakistanis, Indians, and Bangladeshis.

The 1980s saw a tremendous new growth in the flow of immigrants into the United States, partly because of unsettled political conditions abroad, and partly because of new economic opportunity in the U.S. Twenty-seven percent of U.S. (admittedly still low) population growth is provided by immigrants.

The numbers look large, and people point out that the migration to the United States is heavily concentrated, California in particular receiving many immigrants. But, this is nothing new for the United States. The U.S., after all, has always been a nation of immigrants. The previous large wave around the turn of the century--during the Ellis Island days--was much larger relatively. As shown in Figure 5-3, in 1900 the foreign-born numbered 12 percent of the population; today they number seven percent. Today's migrants are heavily concentrated geographically, but so was the wave of ninety years ago. French Canadians migrated to opportunity in the textile mills of New England, and were close to half the population in some New England towns, where French is still spoken on the streets and in sermons. New York City, in particular, was a city of immigrants. For a long time, New York was second only to Warsaw in the number of Poles, second only to Berlin in the number of Germans. Yet these immigrants were successfully absorbed into American culture.

On the whole immigrants continue to be absorbed: Vietnamese brothers and sisters in California speak to each other (though not usually to the parents) in English, and wear Nikes and Levis just like Japanese teenagers in Tokyo. The implications for international relations are interesting: the elite of almost any country now have relatives in the United States. That has always been true for Europeans, but now it is true for Asians and Latinos as well, and increasingly for Africans from troubled countries like Ethiopia.

Immigrants find interesting niches. At one time, before the days of chain convenience stores, 300 of the 400 "Mom and Pop" corner groceries in San Francisco were run by immigrants from a single large village in Jordan. Now their children are graduating from the University of California and the successor stores, such as the 7/11's, are run by Koreans and Indians. Subway newsstands in New York City are run by Gujaratis from India, and motels in the west are also run by Gujaratis. Taxi dispatchers in the District of Columbia broadcast in Amharic and Punjabi to their fleets.

Many of the immigrants seem odd to resident citizens, but many classroom teachers in the U.S.

Figure 5-1 Immigrant arrivals as a percentage of U.S. resident population

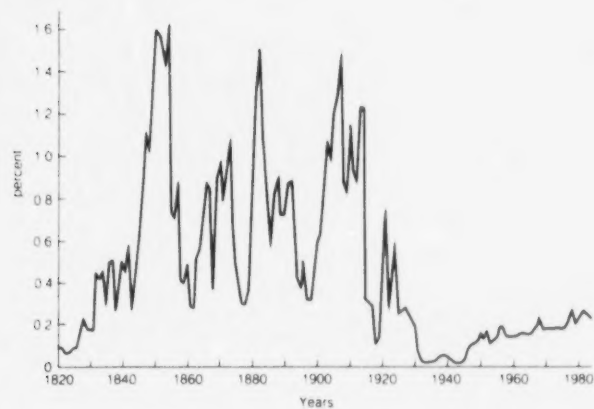
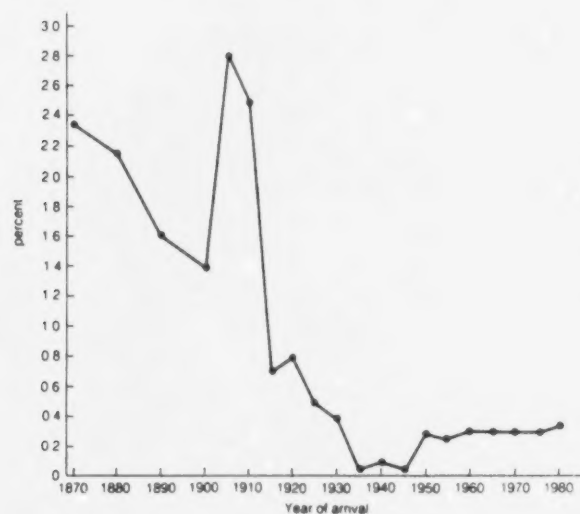


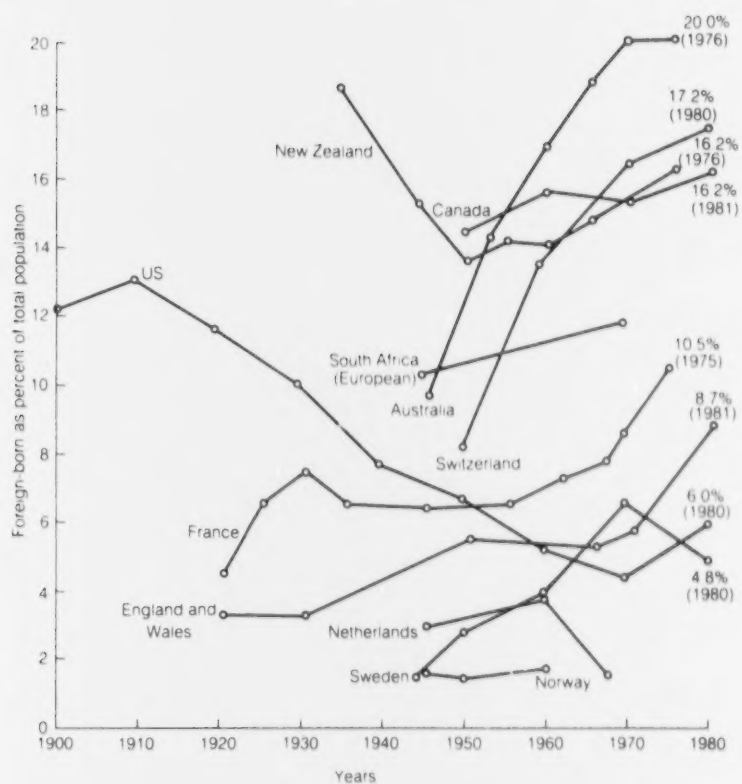
Figure 5-2 Immigrant arrivals of working age as a percentage of civilian labor force, 1870-1980



Note: For 1920-80, immigrants 16 years old and over; for 1900-15, immigrants 14 years old and over; for 1870-90, immigrants 15 years old and over.

Source: Julian L. Simon, *The Economic Consequences of Immigration* (Cambridge, Mass.: Basil Blackwell, 1989).

Figure 5-3 Foreign-born as percentage of total population, in selected countries, 1900-70



Source: Julian L. Simon, *The Economic Consequences of Immigration* (Cambridge, Mass.: Basil Blackwell, 1989).

can tell you the intensity and commitment to learning of immigrant students is clearly evident, and a glance at the economic behavior of most immigrants tells you that they are very savings-oriented (at a time when general domestic savings are down in the United States).

Immigration has always been selective, or rather self-selective. Those who emigrate are typically risk-taking individuals, self-confident, and entrepreneurial. (Perhaps this is even more true of refugees. After all, who becomes a boat person, threatened by exposure, disease, and pirates?) At least for some countries, the immigrants tend to be upper-middle class with better than average education, and perhaps more important, even when not from privileged backgrounds, they see education as the route to success. The older Jewish immigrant success story on the East coast is now being duplicated by Asians on the West Coast and in California there are currently more Asians than Blacks. Many of the nation's top institutions of higher education like Harvard and Berkeley have freshman classes which are more than twenty percent Asian.

Many economists view all this as all beneficial:

Economists are prominent in the current policy debate. They emphasize that people cross borders for much the same reason that Toyotas, computer programs, and Eurodollars do: their expected economic value is greater at their destination. [Schuck 101]

One view, expressed by Julian Simon, (see Bibliography below) argues that we should have unrestricted immigration, because the gains to the economy will be large. Simon's arguments are based on the importance of skills, not just the importance of vigor, as argued above. Borjas (see below also) argues along these lines as well, but points out that recent immigrants have on the average lower levels of skill than earlier immigrants. Certainly from a world point of view there are gains from migration (and in particular from migration to the United States); people come to the U.S. or to Europe because their economic value is greater at their destination, and frequently the financial gains flow back to the country of origin, and these can be large.

A persistent worry is that immigrants will be a net burden on the society, because they will draw welfare disproportionately. This seems not to have been the case, however, because immigrants have been typically young, although recent migrants have been older on the average than those of the 1970s. And their payments in taxes and Social Security have been higher than what they have drawn in welfare. This situation still leaves us with a problem: the Federal tax coffers gain, but localities lose. Some states and cities have borne heavy immigrant concentrations and spend a great deal on social services, for which the Federal government does not compensate them. The debate over who should pay for the costs of immigration and how much should be permitted will certainly continue in the decades ahead.

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Case Study 6

Cash Crop: the International War on Drugs

The nations where most of the world's illicit drugs are produced share one overriding characteristic: they are poor, horribly poor by the standards of North America and Western Europe. Mexico, with average per capita income of about \$2000 a year is the most prosperous of the major marijuana exporting nations. In Colombia, where most of the cocaine is processed, average income is less than \$1500 per year, and in Bolivia, the biggest supplier of coca leaves, annual income is under \$800 per person. In the Golden Triangle of Southeast Asia, an important source of both marijuana and heroin, a person who earns the equivalent of \$10 per week is considered modestly prosperous.

Poverty: A Source of the Drug Trade

The crushing poverty of these nations creates forces that make suppression of their drug trade most unlikely. These forces are illustrated well by the nations that supply cocaine. Almost all of the world's cocaine begins as the leaves of coca bushes cultivated in South America. Peru and Bolivia grow about 80 percent of the crop, with Colombia accounting for the remainder. Processing of the coca leaves into the final product, cocaine hydrochloride powder, takes place chiefly in Colombia, which also serves as the principal point of export to the U.S. and Europe.

The cocaine supply chain begins with the peasants of these countries, whose existence depends on agriculture. The typical plot of land cultivated by a peasant family covers about 2.5 acres. If the family uses the land to raise livestock, they can hope to earn at most \$100 per year. If they raise a crop such as maize, annual earnings can be as high as \$400 per year. But if the land is suitable and the family is willing, \$1200 to \$1500 per year can be made if the crop is coca. Here again profit incentives send the key signals to producers.

In recent years, U.S. government officials have repeatedly proposed halting the cocaine trade by inducing South American peasants to give up growing coca and instead turn to "alternative agriculture," such as livestock husbandry or the cultivation of other crops. As the numbers above should make clear, such a policy is a tough sell, for it would require peasant families to give up 70 percent or more of their income. The cultivation of coca bushes is the highest paying occupation for tens of thousands of South American families, and to ask them to give it up in favor of "alternative agriculture" is asking them to court death by starvation, or at least poverty by choice.

The abjectly low incomes of South American nations add another complication to the problem of stopping drugs at their source. Bribes and intimidation become the order of the day. A mid-level law enforcement official in Colombia earns at best \$200 per month from his job; in Bolivia, the figure is half that. By turning his back on one drug deal, the official can double his income. A senior policeman who regularly cooperates with smugglers can easily raise his annual income to ten times the national average. For the police and many other government officials in Colombia, Bolivia, and Peru, simply ignoring drug transactions means the difference between a life of bare subsistence and one of relative prosperity.

Try the Stick

If the carrot won't work to "buy a deal", there is always the possibility of using the stick. As in most nations where the difference between life and death routinely turns on no more than this year's harvest, in South America the value of life and the cost of exterminating it are low. In Medellin, Colombia, for example, a routine murder (a *trabajito*, or "little job") can easily be arranged for \$100. A more complicated task, such as the execution of a government cabinet minister, might cost as much as \$20,000 (about ten minutes' worth of profits for the Medellin cocaine cartel). Partly as a result of the ample supply of would-be assassins, the per capita homicide rate in Medellin is five times higher than in New York City. As one commentator has put it, when dealing with the drug trade, the choice facing politicians, judges, policemen, and editors in the drug-supplying nations is simple: "Turn a blind eye and you get \$10,000; take notice and your son gets killed." It is little wonder that myopia sometimes seems to be a contagious disease in this part of the world.

Latin America's Multinational Industry

Largely as a result of the drug appetites of North American consumers, the richest consumers in the world, drugs have become a significant part of the economies of supplying nations. Some in Latin America have gone so far as to characterize drugs as Latin America's first truly multinational industry. The export of coca leaves earns Bolivia perhaps \$600 million per year, enough money to support 30-40 percent of its population. Experts estimate that one-third of all illegal drugs and perhaps 70 percent of the cocaine now entering the U.S. enters the country by way of Mexico. Many of the drugs are transshipped from Southeast Asia or South America. Moving the drugs through the country and across the border provides employment for tens of thousands of Mexicans. Cocaine, along with coffee and cut flowers, is one of Colombia's three most important sources of export earnings: cocaine is more important to the Colombian economy than the automobile industry is to the United States. It is little wonder that government leaders in these nations regard as political suicide American demands that they cripple their nations' economies to solve the American drug problem.

The Demand Side

A number of commentators have suggested that the problem may lie as much with the United States--on the demand side--as with Third World countries on the supply side. Milton Friedman, Nobel prize-winner in economics, Thomas Sowell, one of the country's leading economists, George Schultz, former Secretary of State, and others have argued that drug crops are so attractive to farmers in Latin America or Thailand or Pakistan because by making the drugs illegal we *keep* prices artificially high. America's "controls" over entry to the drug trade mean that the price can't fall to a level at which growing coca would be no more profitable than any other crop. If the artificially high price is sustained by policy, the supplies will likely be sustained too.

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Case Study 7

Four Asian Tigers

Some years ago an American comedian used this one-liner: "My folks were so poor, my brother was made in Japan." Today, the same joke would puzzle people. Japan is a world-class economic power and makes some of the highest-quality products in the world. Some of the world's largest business firms and investment houses are Japanese. The days are long gone when people would equate the label "made in Japan" as being synonymous with inferior imitation products.

The Japanese success story seems to be repeating itself in the Pacific Rim, as other Asian countries ascend the world stage as powerful rivals to the U. S., Western Europe, and Japan. These so-called Asian Tigers now number four--South Korea, Taiwan, Singapore, and Hong Kong--but their ranks may include more developing countries in the region before the end of the century. These nations are now characterized as newly industrialized countries (NICs) to distinguish them from the less developed countries (LDCs), discussed previously in relation to the international debt crisis.

What has been the force which distinguishes these four leaders from the less productive nations among the rest of the less developed world? The basic observable difference between the NICs and other less developed countries is the outward-oriented, export-growth development strategies pursued by the NICs. The NICs, however, did not always pursue such strategies.

The Keys to Failure: Infant Industry Protection

During the 1950s and 1960s the governments of the four NICs followed an import-substitution strategy which remains popular in many parts of the Third World. The strategy calls for protecting a country's domestic market from foreign competition. Supposedly, without foreign competition, the country's domestic demand will stimulate domestic production.

In practice, however, the policy produces inefficient industries at home. Without having to compete with experienced and efficient producers from abroad, emerging domestic firms ("infant industries" as they are often called) avoid risky attempts to innovate, tolerate bloated payrolls, ignore needed quality improvements, and fail to achieve the ability to export. One frequent problem is that domestic producers using imported inputs face restrictions and bureaucratic delay in foreign inputs needed for production. They also often face high tariffs on the inputs as well. Often, growth in the domestic industries lags, because domestic demand alone in smaller countries may not be sufficient to support high volume production which often promotes efficiency and uses less land, labor, and capital per unit of output.

The Ingredients of Success: Protection-Free Competition

Taiwan was first in abandoning such protectionist policies and the other Tigers quickly followed. The protective policies were replaced by export-promoting policies. Such policies were a hands-off, market-oriented approach of letting competition spur development.

Hong Kong places few restrictions on firms and offers them virtually no protection. South Korea, Taiwan, and Singapore maintain some restrictions on purely domestic market operations, but have a different set of rules for exporters. Production for export typically takes place there in a market free of restrictions.

Its the same for imports of the materials needed to produce exports.

But the policies of the Asian Tigers have not been totally "hands off." For instance, the governments there have played an active role in credit. Industrialists in the four NICs had a history of difficulty in obtaining loans, so their governments developed banking and financial institutions to finance production for export. Guaranteeing potential exporters access to credit provided a boost to export production.

Following the Four Tigers' Policies

Can other countries reproduce the success of the Asian Tigers throughout the Third World? Many are trying but some characteristics of these four do not exist in other countries. For example, in the four NICs, the government seldom interferes in the labor market: wages are set by the forces of supply and demand. In other countries, Argentina being a good example, the government has used guaranteed jobs to achieve popularity. Until recently, Egypt guaranteed a job to every college graduate.

In some cases these practices of political favoritism may have gone on for so long that efforts at reform may bring political instability. Venezuela and Argentina tried recently to cut back on costly but popular government programs and subsidies. It wasn't that they suddenly discovered the resolve needed to institute reform: they literally could no longer afford to ignore the costs and waste. In both countries, however, the new austerity lead to violent riots.

The evidence seems to indicate clearly that freer markets spur economic growth and development. But it is equally clear that reform is less painful--or at least more politically acceptable--if the reforming country has a history of political stability and job allocations based on ability rather than political favoritism.

Demographic and Economic Indicators

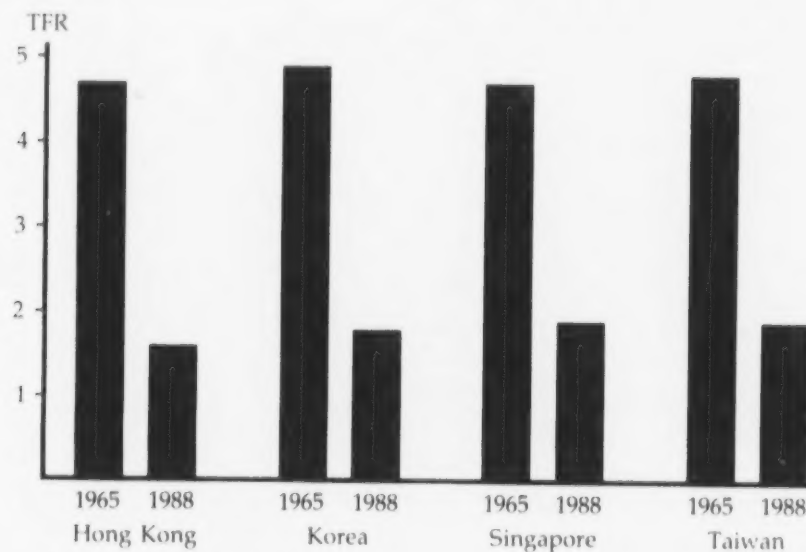
Figure 7-1 and Table 7-1 summarize recent economic--and demographic--events in the Four Tigers. As Table 7-1's far right column shows, their economic growth rate is still very high: Korea's 10.5 percent and Taiwan's 9.8 percent will double their GNP in seven years, and the others are close. The important development which we haven't yet discussed is the effect of economic development on population. As shown in Figure 7-1, the total fertility rate has fallen to unprecedentedly low levels in each of these countries. In each, the total fertility rate (TFR) is so low that the population will sooner or later stop growing if present fertility values are maintained. A replacement TFR of 2.1 would produce zero growth, and their less-than-two TFR's will produce negative growth in time. Their populations are still growing at modest rates because there are still many young mothers, but they are becoming fewer. These four countries basically now have fertility levels equal to European TFR's and their low population growth rate coupled with high rates of economic growth of GDP means high rates of growth of output (GDP) per person.

A Miracle and its Imperfections: the Two Sides to South Korea's Economic Development

Between 1953 and 1990, the economy of South Korea grew by over 1,200 percent in value, after taking account of changes in prices. This was spectacular growth, even for one of the Four Asian Tigers.

In 1961, the average person's income was less than \$100. By 1990, however, South Korea's per capita GNP had grown to over \$3,000. The 1990 per capita GNP is a respectable level in any event, but it is even more impressive considering the great change since 1961. South Korea has grown as much as

Figure 7-1 Total Fertility Rate (TFR)



Source: Kantner (1991).

* Number of children the average woman would bear in a lifetime at the current fertility rates of the time.

Table 7-1 Demographic and Economic Indicators

	Population (millions) mid-1989	Average annual growth rate of population (%) 1980-88	Gross domestic product (GDP) per capita (\$ 1989)	Average annual real GDP growth rate (%) 1986-89
Hong Kong	5.8	1.5	10,924	8.9
Korea	42.4	1.2	4,940	10.5
Singapore	2.7	1.1	10,853	7.9
Taiwan	20.0	1.4	9,810	9.8

Source: Kantner (1991).

Source: "Economic Development and Fertility Decline: Lessons from Asia's Newly Industrialized Countries", *Asia-Pacific Population & Policy*, March 1991.

14 percent in some years. Much of this growth has been achieved by hard work: the typical South Korean worker puts in a 54-hour work week.

South Korea's spectacular growth began on the heels of a political coup which installed Park Chung Hee as president in 1966. Park's government borrowed substantial amounts of money and used it for building factories and equipment. The government paid special attention to developing industries which could produce exportable goods such as steel, automobiles, and ships. In many respects, they followed the Japanese model but adapted it to their own special circumstances.

Forming the *Chaebol*

As part of its development policy, the South Korean government encouraged the formation of the *chaebol*, a small group of corporations which have come to dominate South Korea's economy. Each of the corporations of the *chaebol* is extremely large, and highly diversified over a broad range of business. Hyundai, for example, produces ships and computers, as well as cars and trucks. Samsung, another member of the *chaebol*, manufactures textiles, ships, military aircraft and computers, while also engaging in the financial sector through its insurance business.

Economic growth has produced a prosperous middle class in South Korea. Ninety-five percent of the citizens are literate, and more than one third of today's Korean students go on to universities. Seventy-five percent of all households have refrigerators, compared to only two percent in 1970. Not only have their material lives improved, but South Koreans also enjoy an expected life span twenty years longer than it was only two generations ago.

Problems Still Exist

But statistics don't tell the whole story of the South Korean miracle. For one thing, many say the *chaebol* holds too much power over the economy, so much that smaller businesses have been discouraged, and the government talks of steps to rein in its monopoly like practices. Others contend that political progress has not matched economic progress. Though many enjoy middle-class levels of material well-being, South Korea has not achieved genuine political democracy.

Particularly contentious is the almost life-and-death struggle to gain acceptance to one of the nation's elite universities. But once admitted, students find studies are lax. It apparently is more important to have the old school tie than to achieve academic excellence. Many claim that the annual ritual of violent student demonstrations is a result of students not facing rigorous academic standards.

South Koreans themselves recognize the gap between the nation's rich and its poor. While the export industries have grown, housing, welfare and care for the elderly have largely been ignored. Development has been unequal in different regions. While Seoul has high-rises and expressways, major cities such as Kwangju are still undeveloped.

Economic growth provides the essential ingredients for progress and higher living standards, and without the economic means, options are limited. But as South Korea demonstrates, economic growth also causes strains and brings attention to such things as equality of opportunity, income distribution, health and welfare, and the overall quality of life. Economic growth in South Korea has raised the living standard there for millions, but it has not guaranteed prosperity for all.

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Case Study 8

The United States of Europe: The Integration of the European Economies

The United States of Europe will be born on December 31, 1992. On that date most of the economic barriers that have separated the nations of Europe will come down. Each nation will retain its national identity, language and culture, but many of the restrictions on the flow of people, trade, and investment between the nations will be rescinded or relaxed. Removing many of the trade barriers among the 12 members of the existing European Community (EC) is particularly important to the United States and other non-European economies.

Indeed there is already a clamoring by other European nations to enter the E.C. Sweden and Austria may join as early as 1993, Cyprus and Malta have applied and Norway and Hungary are expected to apply soon (*The Economist*, July 13, 1991, 58). By the turn of the century, the European Community could number twenty.

A more integrated Europe poses a serious challenge to Europe's economic competitors. They will be facing a "United States of Europe." For the 12 current members this includes nearly 330 million consumers, a gross national output of over \$4 trillion and a growth rate which is expected to exceed that in the United States. Many hail unification as a step toward increased political stability and freer world trade. The evidence, however, suggests that trade within Europe will grow more rapidly than Europe's trade with the rest of the world.

Recent Trends

Since 1985, regional integration within the European Community has caused trade among members to increase almost 20 percent. On the other hand, trade between the EC and non-member countries has fallen 10 percent during the same period.

A similar trend has occurred in North America—the U.S., Canada, and Mexico. Trade among these three countries is increasing by about 20 percent, while at the same time trade between the region and Europe has only increased five percent. These trade trends are expected to intensify as the result of the recently completed Canada-U.S. Free Trade Agreement, the proposed U.S.-Canada-Mexico free trade agreement, and the coming 1992 European unification.

The United States of Asia

Along the Pacific Rim, Japan has integrated economically into much of Asia. Throughout the region, Japanese firms have been building factories and establishing strong trade ties. Japan's trade with its Asian neighbors increased 30 percent in 1990 alone. Trade within the nine-nation ASEAN block—Japan, South Korea, Taiwan, Hong Kong, Singapore, Indonesia, Malaysia, Thailand and the Philippines—is increasing by more than 30 percent a year. At the same time, this Pacific Rim area has increased trade with Europe and North America only by about 15 percent.

Regional Integration and Protectionism: a Trading Paradox

As the regions of Europe, North America, and Asia have increased their intra-regional trade, they have simultaneously slowed the growth of trade between the regions. The reason? Protectionism. Within the European Community, protectionism against non-European countries is rampant. For example, Italy has adopted regulations that ban Japanese cars from Italian markets. By refusing to sanction even the slightest infractions of its regulations, France routinely prevents Japanese electronics from crossing the French border. The United States has also been engaged in protectionism. During the 1980s, protectionist actions on the part of the Reagan Administration pushed the United States's share of total imports subject to quotas or other official restraints from 12 percent to 23 percent.

Lingering Issues of European Unification

As 1992 draws near, North America and Asia have reason to be concerned by the economic muscle of a unified Europe. But there are inevitable limitations to any union among peoples of widely different cultures, languages, and political sentiments.

Not a Homogeneous Market

While the objective of a single common market in Europe is to have goods, capital, and labor move freely from one country to another, this open market is not the same thing as a homogeneous market. Cultural differences will still exist. Success of one product in one country will not automatically create success in others. That means that production and marketing efforts will have to be tailored to each different consumer group. Nationalism will still exist and create brand loyalties based on nationalistic pride.

Language and cultural differences often create stronger barriers than national borders. The movement from France to Germany is not quite the same as movement from Montana to Missouri, or even from Manitoba to Michigan. In the U.S. and much of Canada there is a common language. In contrast, the French worker moving to Germany would need to become fluent in German in order to succeed among the German work force. Of course Europeans are more likely to be multi-lingual than Americans. And regional and linguistic diversity exists in North America and Asia just as in Europe. But still these factors do temper concern that a united Europe will overpower other trade competitors.

Political Resistance

Many observers believe that Margaret Thatcher's recent fall from grace within her own party, despite having served as England's prime minister for over a decade, was due to her foot-dragging on European integration. Still there remains many, especially in Britain, who believe that retaining some border control for individual countries is needed to stop illegal immigration, the inflow of illicit drugs, and the easy transit of terrorists.

Taxes

Another major issue that will be a stumbling block to integrating Europe concerns taxes. All EC members have some form of taxation on goods and services called value-added taxes, or VATs. Spain's

VAT is about 10 percent, for example, while Ireland's is 24 percent. The European Commission, the leadership group in charge of planning the 1992 changes, wants to equalize these figures across countries.

The British government of Margaret Thatcher was opposed to such mandatory changes. It did not want to relinquish control of the British government's power of taxation. Thatcher's successor, John Major, may be more agreeable. Resolution of the issue would still leave other financial issues to resolve, such as how best to create a common currency for Europe.

A Euro-Currency?

The goal of a free flow of labor, capital and goods across borders appeals to virtually all members of the European Community. However, giving up control of such traditional sovereign powers as taxing authority and controlling the supply of money would be difficult steps for national governments.

Why is relinquishing control over its money supply so difficult? Most governments use their supply of money to control overall economic activity. A frequent use of increasing the money supply is to stimulate economic activity. Usually the process involves the country's central bank's buying government bonds from the nation's private banks, businesses, and individuals. With more bank reserves on hand, the banks can increase the loans they make, and interest rates fall, at least initially. As the money in circulation increases, employment is stimulated.

But increasing the money supply can touch off serious bouts of inflation: the familiar too-much-money-chasing-too-few-goods problem. Who should control such economic forces? This is one of the crucial questions in the European unification debate. If each country can pursue its own money and lending policies as it does now, their independence creates the potential for economic tensions. Even though Europeans can now exchange separate currencies easily, the multitude of different monies makes trade more cumbersome and costly than it would be with a single currency, as in the U.S.

Still, There Are Concerns

In spite of the difficulties just mentioned, the non-European world has reason to be concerned about the economic challenges stemming from the emergence of a Fortress Europe. Now, instead of facing 12 leaky tariff walls, non-Europeans may face one strong protective curtain.

With the passage of the Omnibus Trade and Competitiveness Act of 1988, the President of the U.S. has the power to retaliate against trade restrictions and he has used this power. When Europe banned imports of American beef from animals treated with growth hormones at the end of 1988, the U.S. responded quickly. The U.S. threatened to double import duties on European meat products.

Many fear that the U.S. and other non-European nations will use similar methods to retaliate if Europe promotes economic protection along with unification. There is evidence that the 12 EC countries are establishing, little by little, numerous changes in their laws to prevent competition from outside the EC. If the non-European nations do retaliate, everyone will be hurt by increased trade barriers. For a united Europe, the gains from increased trade within its borders after 1992 may be offset by reductions in trade between Europe and the rest of the world. The possible reductions in external trade from the new E.C. is a key concern of policy makers and businesses worldwide.

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Case Study 9

Markets or Mandates: the Soviet Economy

By all accounts, 1990 was a banner year for Soviet agriculture. Yet in the winter of 1990 there were wide-spread food shortages in Leningrad, Moscow, and other large cities in the Soviet Union. Western observers speculated that perhaps anti-reform forces in the Soviet Union used the complex Soviet bureaucracy to sabotage the nation's food-distribution network. These observers believed that they did this to embarrass Mikhail Gorbachev and to derail reforms which rapidly had been eroding the power of the Communist party and the economic well-being of government bureaucrats. Indeed, the KGB's attempted coup de etat against Mr. Gorbachev on August 19, 1991 added credibility to this contention.

Another view is that this year's shortages are just more examples of the failure of a command economy. Shortages of food and many other items have been a common feature of life in the Soviet Union. This position argues that the political freedoms fostered by *glasnost* (openness) have not been matched by economic reforms needed to invigorate the nation's rapidly deteriorating economy.

When Gorbachev came to power in 1985, he inaugurated a program called *perestroika*--a restructuring of the Soviet economy. Perestroika called for more private ownership of the factors of production, of land and capital, and more freedom for labor. Under the program, after 1988 enterprises were to be supported according to their profitability.

But old ways die hard, and in the Soviet Union, old ways seem to abound. The Soviet people have lived under Communism and central directions for more than 70 years. During that time the Communist party elite has become deeply entrenched. Now, the resulting bureaucratic system seems geared to serving one primary goal: keeping the party elite in power. The elite bestows favors on those who serve its purposes. For example, a degree in engineering has been an especially coveted degree. (Beginning with the rule of Stalin, the Soviets have had a preference for large industrial projects.) But no matter what other credentials one had, party membership was crucial to success in any field. Consequently scientific research often suffered. The system has not rewarded objectivity. Ideology was all-important, regardless of scientific knowledge or of the real world know-how.

Those favored by the Communist party received the best housing available and shopped at stores reserved for the elite. Above all, they had access to Western goods. It is rumored that many of the top party leaders did not trust the quality of Soviet-made heart pacemakers, and used their power to obtain ones made in the West. The best jobs were said to belong to Soviet journalists and diplomats, because they traveled abroad and could buy Western goods.

Despite all of this, most Soviets favored a command system because it offered certainty, even at the expense of more and better goods. Everyone had the security of a job with the state. Only when economic stagnation reached the crisis stage in the late 1980s did it appear that reform would be widely accepted. The despair felt under the old system is apparent in a joke Soviet workers routinely tell: "We pretend to work, and they pretend to pay us."

In spite of some early success with reform, in 1990 Gorbachev began backing away from his earlier efforts. Many economists and political scientists watching events in 1991 have said that Gorbachev has failed the crucial test: advancing private ownership of the factors of production. Without such a dramatic change the observers say, talk of reform is just talk. A market system does not work in directing the use of resources if there is not some form of private ownership of those resources. By mid 1991 Gorbachev was reconsidering his reluctance and again talking support for private ownership and freer movements of prices,

by August 19th, he was under "house arrest."

Market Economies vs. Command Economies

As hopeless as the Soviet economy looks today, for a time during the 1950s and 1960s people feared that the Soviet economy might overtake the economy of the United States. Was the potential real or an illusion? In hindsight, it seems that much of the promise of the Soviet economy was exaggerated.

Part of the problem was in the measurements used to compare the two economies. Soviet statisticians often measured Soviet output by including production which really had no value in use, although the physical quantities existed in the accounts. Quantities of steel and concrete were included as output even though they were not usable or put in areas of no use. Often such output simply piled up worthlessly, and could even be viewed negatively if the output occupied scarce warehouse space.

Another problem of comparison was that no thought was given to considering quality of the Soviet output. Producing a final product, such as a car, increases GNP the same in any country, if the measure is simply physical units. But the better measure is the value of goods produced. In that case, a car which doesn't break down every other mile adds more to the value of output than one that does.

Quality control and maintenance is a difficult problem for a command economy. If output is determined according to an output target rather than the value to the buyer, producers will make a large quantity of output with little regard to quality.

A telling example is revealed by the Soviet pipe and chemical industries, which have lagged far behind those in the West. The Soviet chemical industry suffered because suppliers of materials for construction of chemical plants produced steel rather than plastic pipes. Managers of factories supplying pipes for the construction of chemical plants knew that central planners judged their efficiency on the amount of pipe fittings produced (by weight). Managers knew that they would have to work much harder to meet their quotas if they produced plastic pipes rather than heavy steel ones. Had the managers' success depended on meeting the demands of the chemical industry (instead of a physical target) they would have produced the type of pipes needed by the purchasers. They would have tried to supply less costly plastic pipes, and satisfied the goals of the chemical industry. But the central planners didn't give the right signals.

Prices, Profits, and Property

The major fault with the Soviet economy has been its lack of a true pricing system. When markets operate freely, that is with every seller free to sell to the buyer offering the highest bid, then prices effectively perform two functions: they serve as signals to buyers and sellers, and they act as a rationing device.

First, the prices signal to producers what it is that consumers want; the most valuable products (ones with the most desirable attributes) command the highest price. Prices also signal which resources producers should use in production. A producer does not need to know intricate details such as that a coup in Zaire has reduced the supplies of an important mineral (ore for production). Producers need only know that the price of that input has risen; then they look for the best substitute.

Second, prices ration scarce items to those who value them most. When buyers' demands exceed the available quantity supplied, prices rise. The higher prices attract resources so that some of the excess quantity demanded is met by increased production. At the same time, the quantity demanded falls as the price rises. Both factors, the larger quantities supplied and smaller quantities demanded, work to eliminate

the shortage. Rising prices eventually cause the shortage to disappear.

If prices do not determine what is produced and with which resources, then some other means of signaling and rationing must be found. In the Soviet Union's command economy, the mechanism was the five-year plan in which central planners determined what was to be produced and how. The central planners used accounting prices, but these prices had no relation to underlying supply and demand conditions and market values. These prices were used simply to record events after the fact.

Of course, the planners were attempting to allocate resources to fulfill production goals, but because this requires the processing of detailed knowledge of a multitude of conditions, the planners were seldom correct in the values they set. The prices set were typically incorrect and the signals those prices sent to buyers and sellers led to inefficiency. The manifestation was severe shortages in some products coupled with gross excesses of unwanted products. These problems still exist throughout the Soviet Union.

The price system in a sense always has worked in the Soviet Union, but it has worked perversely. We know that when planners have set prices too low, shortages occurred. But prices must rise when quantities supplied are less than quantities demanded. Even though bureaucrats forbade money prices from rising, new costs are added. Real prices rose by people paying higher time costs by standing in lines. While standing in line, they sacrificed a valuable commodity for their purchases: their time. Consider the time that could have been spent doing something else besides waiting in line. Add to that the monetary cost of the good and you get the true, higher price paid for scarce goods in a command economy.

Another manifestation of price rises was on the black market--the unofficial source of supply for many scarce goods in the Soviet Union. If goods were particularly limited, stealth and bribery might enable an individual to get them. But such activities are risky. Goods bought on the black market--the Soviet Union's informal economy--command a premium to reflect the risk that suppliers face in operating underground. The black market still thrives in the Soviet Union, similar to the market for illegal drugs in the U.S. and elsewhere.

The Soviet Union's Three Economies

There are three forms of economies in the Soviet Union: (1) the official economy, in which things are done according to the dictates of the central planners; (2) the secondary economy, or black market; and (3) the informal economy. In the informal economy, Soviet managers pursue official objectives by working around the central planners.

The central planners' prices lead to inefficiencies in the market for inputs just as in other markets. State factories fail to receive critical resources because of mistaken estimates of central planners. Conversely, they often receive resources they cannot use, again because of bad estimates by central planners. Because of the chronic problems of shortages and delays of inputs, many factories' workers have little to do but wait for bureaucrats to break the bottlenecks. The work pace is uneven, with slack periods followed by frantic activity with workers desperately trying to meet quotas on schedule once supplies or replacement parts arrive.

To eliminate these interruptions and cycles in production, an informal economy exists in which Soviet managers barter with one another for resources. Managers also get supplies and parts from the black market illegally.

Managers often manufacture key replacement parts within their own factories rather than rely on the sporadic supply system under the central planners. For example, in the Soviet Union only about four percent of standard metal components are produced in specialty plants. The other 96 percent are produced

by the enterprises that use the components in carrying out their official production activities. Market economies do things differently. In the United States, for example, over 70 percent of these components are produced by plants that specialize in producing them. This specialization leads to higher levels of productivity, reliability and quality.

Similarly, plants of all sizes in the Soviet Union produce equipment for their own use. A Soviet automobile plant may make its own robotic equipment, a shoe factory its own glue. If an enterprise wants to expand, it may use its own factory workers as carpenters and electricians to build the new buildings. Some enterprises have even built their own power generators in areas where electricity fails.

Some Soviet state enterprises produce consumer goods for the workers in addition to carrying out the state-mandated production. A Soviet shoe factory might raise livestock or grow potatoes on a plot of land next to the plant. They siphon off inputs into this informal activity from official channels, buy them on the black market, or get them through barter with other enterprises.

The problem with such jack of all trade activities is inefficiency. As an individual enterprise expands into more and more activities, its workers have to do a greater number of jobs. But in so doing, workers do not specialize, so they are less productive than if they specialized in one or a few tasks. Studies conducted by Soviet experts show that this kind of in-house production costs more than production in specialized plants. Nevertheless, it continues as a problem because those with vested interests in the old system are reluctant to change to a more market-oriented economy; indeed they're fighting hard to secure the old system.

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Case Study 10: International Environmental Problems

Owning the Sky: Protecting Europe from Acid Rain

A major environmental problem in many parts of the world today is acid rain. One of the leading causes of acid rain is the emission of sulphur dioxide, a chemical compound generated by burning electric power plant generators. The emissions spew from smoke stacks, enter the atmosphere, and are returned to earth with a cloudburst--as acid rain.

Many countries have established restrictions to reduce or eliminate acid rain emissions. But until recently, most have simply ignored the emissions which the winds simply carry off to fall on another country. Perhaps the only reason for this obvious oversight is there is no one who owns the air. It is one thing to prevent the violation of a country's airspace by another's jets, but who really owns common property such as air, water, and the like? Without ownership vested in someone, or some country, who can enforce against or seek compensation for the destruction of the common property of air?

The Implicit Cost of a Unit of Pollution

This problem is particularly severe in Europe where many countries, each with their own industries belching sulphur dioxide, are concentrated in a relatively small geographical area, and recent studies have attempted to estimate the damage that each European country inflicts on its neighbors with sulphur dioxide emissions. Using a meteorological computer model to estimate the volume of emissions generated, cost estimates can then be made of the damage caused by each unit of emission. Having computed the implicit cost of each unit of emissions, and the total volume of sulphur "imported" from neighboring countries, the annual costs to countries of their neighbors' pollution can be calculated. The big importers of other countries' pollution have turned out to be countries such as the Soviet Union and Poland, which are big polluters in their own rights. Other big polluters included the "cleaner" countries such as Germany, France, and Sweden. Britain is relatively immune to the emissions of other countries because Britain benefits from the prevailing wind patterns which blow towards continental Europe. This wind pattern protects it from other countries' pollution.

Is Bribery the Answer?

How can these countries cooperate to reduce damages to each other? If countries co-operated in their environmental regulation, they could reduce the total costs of pollution damage and abatement. But how? The following hypothetical example explains one example of how co-operation could be achieved and pollution reduced.

Consider two countries, Britain and Sweden, as an example of possible cooperation. Sweden is down-wind of Britain, and imports half of British emissions. Up-wind, Britain suffers only its own pollution. Further assume that Britain suffers \$100 of environmental damage from each ton of its own emissions, and it sets its standards of total environmental damage so that the cost of reducing one more ton of emissions just equals \$100. In short in Britain it costs \$100 in resources (abatement equipment) to gain \$100 in a

better environment (one ton less emissions). Sweden is different and, because of its many lakes and forests places a higher value on the damage done by one unit of emissions, say, \$150. So Sweden sets stricter (more costly) restrictions to eliminate emissions. But the Swedes also suffer from the emissions from Britain which are blown down-wind over Sweden. Because it suffers one half of Britain's emissions and values the costs per ton at \$150, each ton of British pollution costs Sweden \$75, (one half times the damage to Sweden—\$150—of a ton of emissions: $1/2 \times \$150 = \$75$).

Many economists, argue that Sweden would be acting rationally to bribe Britain up to \$75 for each one-ton reduction in emissions from Britain. Each ton of British emissions damages Sweden by \$75, so for any bribe less than \$75, Sweden would gain more in environmental benefits than it would pay in bribes. It gains in net terms. Britain clearly gains from the bribes and also would not otherwise reduce emissions on its own because without being bribed only \$100 is gained from reducing emissions by an extra ton. And it costs \$100 to reduce one ton of emissions in Britain. Now for a bribe of \$25 from Sweden, that gains \$50 net to Sweden (\$75 in damage minus \$25 paid) Britain will be willing to reduce a ton of its emissions; Britain gains too. It gains \$100 in environmental benefits, but only had to pay \$75 for it (\$100-\$25). In short, the bribe benefits both countries.

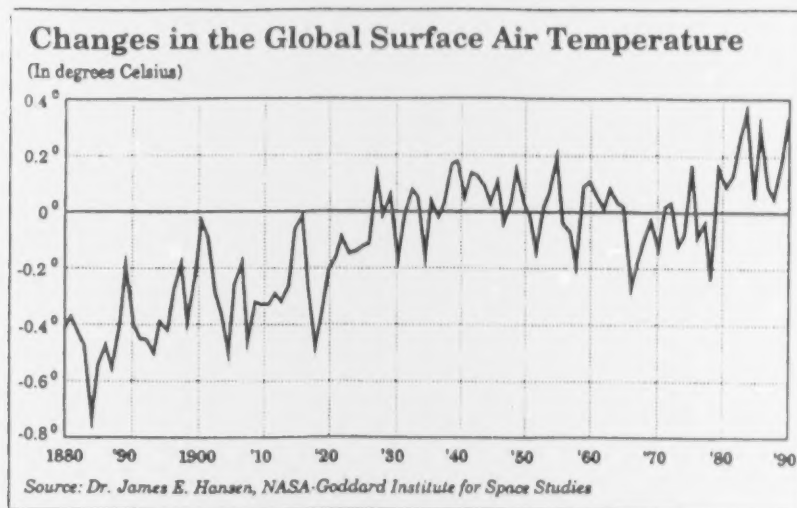
Bribes not to pollute may seem wrong to some from a moral standpoint, but in fact bribes of a sort are already being tried in the way just described. Finland and Germany, for example, want to pay Eastern Europe to curb its pollution. Without bribes, some countries will not co-operate, and gains from exchanges and cooperation in cutting back emissions further will be lost. For similar reasons, adopting uniform standards of emissions for each country throughout Europe would not produce the same gains. Uniform standards do not take account of differences in population and emission impact between countries. More densely populated areas incur more costly damages than sparsely populated areas for a given level of pollution emissions. In addition there are other countries than Sweden down-wind of Britain. Consequently it makes sense to reduce emissions more in Britain than in Sweden, rather than apply a uniform standard for both.

The Greenhouse Effect

The "Greenhouse Effect" is the term given to the claim of a warming of the earth's atmosphere due to trapped carbon dioxide. It is certain to be a prickly international environmental issue for decades. For example, the July 15, 1991 issue of **USA Today** showed statistics from the United Nations's Environmental Program revealing that carbon dioxide emission have been led by the U.S. (22%), followed next by the U.S.S.R. (18%), Japan (4%), Germany (3%), and Britain (2%). It will be debatable indeed if we can be certain that there *is* a Greenhouse Effect, because presently there is no scientific consensus on the subject, even though the press, on the whole, tends to treat the issue as settled.

There are reasons for caution in asserting the existence of a Greenhouse Effect. First, the forecasts change. In 1976 for example scientists were predicting a cooling of the earth, not a warming. (Figure 10-1) In addition, there is the fact that our measurements are not very precise. Most weather stations are at airports or in cities, and the well-know heat island effect, which means that such areas tend to be hotter than the surrounding countryside, and get hotter as they get larger, may well account for much of what is being recorded. For example Reed Bryson, a climatologist at the University of Wisconsin, has a series of temperature readings from 150 non-urban stations in the U.S. which show no rise in average temperature at all. Finally, as Figure 10-1 shows, there is the fact that most of the touted rise occurred before fifty years

Figure 10-1 Changes in the Global Surface air Temperature



Source: S. Fred Singer, "Fact and Fancy on Greenhouse Earth", *Wall Street Journal*, 30 august 1988, 18:3-6.

ago in an era in which carbon dioxide releases were considerably less than today. Skepticism certainly seems the better part of wisdom. Other factors are clearly at work besides carbon dioxide.

Still, suppose the Greenhouse Effect is real. How can we deal with it? Economists encourage the management of things through markets rather than by regulation, and many have proposed some form of carbon emissions tax, with the level of the tax set high enough to choke off further warming, or to allow only a modest amount more. This proposal has the desirable property of also reducing smog, but unfortunately, the level of the taxes proposed are staggering. The calculations used so far are merely illustrative, but one proposal to limit CO₂ emissions to about 18 percent above current levels would result in a carbon tax on oil of \$30 per barrel. The current price of oil is only around \$20, so such a tax would clearly be very large, and therefore hotly resisted.

What are the implications of such a tax for international relations? Who would impose the tax, and on whom? The ultimate issue is likely to be one of conflict of advanced countries with the Third World. If Third World countries are to grow, their emission of greenhouse gasses will have to increase, even if they act in a more energy-efficient way than others have in the past. Consequently the Third World is likely to perceive advocates of emission reductions as speaking from a position in which the advanced nations have already risen to wealth, and are now trying to prevent the poorer countries of the world from getting their share.

Finally, suppose again that the Greenhouse predictions are real and that no one does anything about the warming. Does this necessarily mean disaster? Consider the climatological shifts. Hotter air may reduce grain output in Iowa, but raise it in Canada and Siberia; little has been done to figure out what these net economic effects might be. One effect, some scientists have argued, is that some plants will be more productive in an atmosphere richer in carbon dioxide.

In short, our early estimates have not taken into account the adaptive reactions which farmers might make. Recent work in Missouri, Iowa, Kansas and Nebraska demonstrated that,

adaptations would significantly reduce the negative impacts of a hotter and drier climate on crop yields. ...Simulation models of plant growth indicated that, in the absence of adaptations the production would be about 22 percent less in 2030 than if the climate did not change. When allowance was made for adaptations that farmers could make, including new technologies developed by research institutions, the simulation models showed a decline in the production of corn (the most sensitive to climate change of the crops studies) of only 9 percent. [See **Resources**, Spring, 1991 below]

Given the many uncertainties both about the reality of the Greenhouse Effect and its consequences, it seems appropriate to go slow with costly policy proposals, engage more studies and deliberate intelligently together on an international basis.

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Part 4: International Economic Institutions

Common Market. See European Community.

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These research organizations draw their funding from the group.

CIAT:	Center for Tropical Agriculture (Colombia)
CIP:	International Potato Research Center (Peru)
CIMMYT:	International Center for the Improvement of Wheat and Corn (Mexico)
IBPGR:	International Board for Plant Genetic Resources (Rome)
ICARDA:	International Center for Agricultural Research in the Dry Areas (Syria)
ICRAF:	International Council for Research in Agro-Forestry
ICRISAT:	International Crops Research Institute for the Semi-Arid Tropics (India)
IFPRI:	International Food Policy Research Institute (U. S.)
ILRAD:	International Laboratory for Research on Animal Diseases (Kenya)
IIMI:	International Irrigation Management Institute (Sri Lanka)
IRRI:	International Rice Research Institute (Philippines)
ISNAR:	International Service for National Agricultural Research (Netherlands)
WARDA:	West African Rice Development Association (Ivory Coast)

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European Coal and Steel Community (1952). The first step towards a general common market in Europe, the ECSC provided for a common market in iron and steel among Germany, Italy, France and Benelux. Other countries joined later.

European Community (1957). Originally the European Economic Community. The treaty of Rome laid the foundation for a customs union; it is often referred to as the Common Market. The members include Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom. They share a customs union and similar economic and political interests. The Community has agreed, in principle, to become a completely integrated market community after 1992.

European Free Trade Association (1959). A group of countries excluded from the original European Economic Community.

Food and Agriculture Organization (1945). Commonly called FAO, provides research and technical assistance to Third World agricultural countries.

General Agreement on Tariffs and Trade (1948). Headquartered in Geneva, it is a body for bargaining over mutual tariff reduction. Ninety-two member countries are committed to the expansion of multi-lateral trade, with reduction in tariffs, quotas, and preferential trading arrangements. Current negotiations for mutual tariff reductions are called the "Uruguay Round." See references below.

International Bank for Reconstruction and Development (1947). See World Bank.

International Labor Organization (1919). It is concerned with working conditions, the spread of social security, and standards for social justice, and provides technical assistance to Third World countries.

International Monetary Fund (1947). Seeks to promote international trade and monetary cooperation. The fund is also influential in maintaining foreign-exchange stability, and helps countries with balance-of-payments problems.

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Part 5: Acronyms and Glossary

SELECTED ACRONYMS

AID: Agency for International Development

ASEAN: Brunei, Singapore, Indonesia, Malaysia, Thailand, and the Philippines

CAP: Common Agricultural Policy (EC)

EC: European Community

EEC: European Economic Community

EMS: European Monetary System

FAO: Food and Agriculture Organization of the U. N. (Rome)

FDI: Foreign Direct Investment

GATS: General Agreement on Trade in Services

GATT: General Agreement on Tariffs and Trade

GDP: Gross Domestic Product

GNP: Gross National Product

IDA: International Development Association

IFC: International Finance Corporation

IMF: International Monetary Fund

LDC: Less Developed Country

MFA: Multi-Fibre Agreement

NIC: Newly Industrialized Country

OECD: Organization for Economic Cooperation and Development, formerly the Organization for European Economic Cooperation

OPEC: Organization of Petroleum Exporting Countries

TFR: Total Fertility Rate

USTR: United States Trade Representative (in GATT negotiations)

VAT: Value-added Tax (EC)

VER: Voluntary export restraint

GLOSSARY

absolute advantage: ability of one country, using the same amount of resources as another country, to produce a particular product at less cost than the other country.

acid rain: an environmental hazard caused by emissions of sulphur dioxide into the atmosphere. In the atmosphere, sulphur dioxide is converted by oxidation into sulfuric acid, which then returns to earth in rain or snow.

aggregate demand: total demand for goods and services from all sectors of the economy; business, consumer, government, and foreign.

authoritarian socialism: system that supports revolution as the means to overthrow capitalism and bring about socialist goals. In such a system, the entire economy is controlled by a central government; also called communism.

balance of payments: summary record of a country's economic transactions with foreign residents and governments over a year; difference between amounts paid to and amounts received from foreigners.

balance of trade: difference between the value of a nation's exports and its imports.

barriers to entry: obstacles of competition that prevent others from entering a market.

black market: a market in which goods are traded at prices above their legal maximum.

capital: all property, machines, buildings, tools, and money used to produce other goods and services.

capital account: an account in the balance of payments which records the flow of financial assets into and out of a country.

capital flight: movement of financial capital out of a country.

capital goods: producer goods; goods that enterprises use to make other goods.

capitalism: system in which individuals own the factors of production and have the right to use those resources in any way they choose within the limits of the law; also called market system or free enterprise system.

cartel: a group of suppliers who conspire to reduce competition among themselves by controlling price, production, and distribution.

central bank: a country's main government bank that controls the money supply and the banking system.

command system: economic system in which the government controls the factors of production and makes all decisions about their use.

commodity: anything useful; an object or service which is created as the result of a process of production.

common property: property which no one individual has ownership; property held in common for all to take or share.

communism: a system where the entire economy is controlled by a central government; also called authoritarian socialism.

comparative advantage: ability of a country to produce a product at a lower opportunity cost than another country.

competition: rivalry among producers or sellers of similar goods to win more business by offering lower prices or better quality.

current account: an account in the balance of payments which records the value of goods, services, unilateral transfers, and investment income which flow into and out of a country.

customs union: a group of nations which have no trade restrictions among themselves and which adopt a common tariff on goods imported from countries outside the customs union.

default: a failure to pay all or part of a debt at the time it is due.

deficit financing: spending by government in excess of revenues collected through taxes.

deflation: decline in the average price level.

demand: the amount demanded based on the willingness and ability of a person (or people) to buy an item.

democratic socialism: system that works within the constitutional framework of a nation to elect socialists to office. In such a system, government controls only some areas of the economy.

depreciation: fall in price of a currency through the action of supply and demand; a depreciated currency trades for less relative to another currency after depreciation.

depression: major slowdown of economic activity during which large numbers of people are out of work, many businesses fail, and the economy operates at far below capacity.

deregulation: reduction in government control over business activity.

devaluation: lowering of a currency's value in relation to other currencies by government order.

developed nation: a nation with a relatively high standard of living and an economy based more on industry than agriculture.

developing nation: a nation with limited industrial development and a low standard of living; such countries are also referred to as less developed countries (LDCs).

duty: a government tax on imports.

economic assistance: loans and outright grants of money or equipment to other nations to add to their capital resources.

economic efficiency: the wise use of resources so that people will be as well off as they can be in an economic sense.

economic rent: profit over and above the competitive rate of return to a resource.

economic stagnation: economic conditions characterized by low or even negative economic growth.

economic system: way in which a nation answers the basic questions to satisfy its people's needs and wants.

economics: study of how individuals and nations make choices about ways to use their scarce resources to fill their needs and wants.

economies of scale: production activity in which large enterprises take advantage of mass production techniques that result in lower production costs.

economy: all the activity in a nation that together affects the production, distribution, and use of goods and services.

embargo: complete restriction on the import or export of a particular good.

equity financing: raising money for an enterprise by selling stock, or shares of ownership, in the enterprise.

export: good sold to buyer in another country.

European Community (EC): see the section on institutions.

factors of production: resources used to produce goods and services; land, labor, and capital; some economists include entrepreneurship.

federal budget deficit: spending by the federal government in excess of the money it collects through taxes.

Federal Reserve Bank: the central bank of the United States.

five-year plan: a plan designed by a central authority that outlines production goals for a five-year period and details how they are to be met. Five-year plans are a central feature of command economies such as those of the Soviet Union and China.

fixed rate of exchange: system in which a government sets the value of its currency at a fixed rate in relation to the currencies of other nations.

flexible rate of exchange: system in which the forces of supply and demand are allowed to set the price of various currencies.

foreign aid: money, goods, and services given by governments and private organizations to help other nations.

foreign direct investment (FDI): the purchase of tangible assets (e.g., a factory) or shares of ownership (i.e., stock) in a foreign country.

foreign exchange market: market that deals in buying and selling of foreign currency.

foreign exchange rate: price of foreign currency in terms of domestic currency; for example, if the foreign exchange rate for French francs in terms of U.S. dollars is \$0.20, then it takes twenty cents to purchase one franc.

free enterprise system: system in which individuals own the factors of production and decide the answers to the basic economic questions for themselves through the interaction of individuals looking out for their own best interests; also called market economic system or capitalism.

glasnost: Russian word denoting openness, used to describe the easing of restrictions on forms of expression and dissent within the Soviet Union.

goods and services: end result of combining factors of production. Goods are the things people buy; services are the activities done for others for a fee. "Goods" is sometimes used to mean both goods and services.

gross domestic product (GDP): total value of production which occurs within a country during a given period.

gross national product (GNP): total market value of all final goods and services produced by a nation during a given period. It can differ from GDP, for instance, if workers earn incomes abroad, as many Egyptians, Indians, and Pakistanis do in the Persian Gulf.

human capital: the capabilities and skills possessed by an individual or people.

immigration: movement of people leaving one country to settle in another.

import: good bought from another country for domestic use.

import quota: restriction on the value or number of units of a particular good that can be brought into a country.

inelastic demand: situation in which the rise or fall in the price of a product does not greatly affect the price of that product people are willing to buy.

infant industries: industries in the early stages of development, not having had time to develop the technology and expertise found in identical industries in other countries which have reached a greater level of maturity.

inflation: increase in the general price level of goods and services.

informal economy: economic activity that takes place as barter between Soviet factory managers or through the Soviet Union's black market in an effort to overcome input shortages that are common in that country's command economy; one of the three economies said to operate within the Soviet Union. See command economy and black market.

inputs: land, labor, and capital used for production.

institutions: any organization, arrangement, or standard of behavior which establishes certain rights and duties for the members comprising the institution. Institutions may be formal, involving laws which limit or command certain behavior and impose penalties for failure to conform to the laws; or institutions may be informal, involving customs and informal punishments.

interest: amount a borrower must pay for the use of someone else's money. Payment a creditor receives when lending money.

interest rate: annual payment made by a borrower to a lender for the use of funds, expressed as a percentage of the amount borrowed.

intermediate inputs: goods or resources which are used up entirely as inputs in the production of final goods.

International Monetary Fund (IMF): see the appendix on institutions.

labor productivity: the amount of output produced by a unit of labor.

less developed countries (LDCs): those countries characterized by low standards of living and limited industrial capabilities. See developing nation.

market economic system: system in which individuals own the factors of production and decide for themselves the answers to the basic economic questions through the interaction of individuals looking out for their own best interests; also called capitalism or free enterprise system.

mixed economy: system that contains characteristics of a command economy and a pure market economy; each economic system is mixed and leans more toward one pure type than another.

monetary base: total of all official reserves along with currency and coins in circulation in the economy.

monetary policy: policy that involves changing the supply of money to affect the amount of credit and, therefore, business activity in the economy.

monopoly: firm that has great control over the price of a good. In the extreme case, a monopoly is the only seller of a good or service.

national income: total income earned by everyone in the economy. Close to Gross National Product, except for technicalities.

net national product (NNP): value of a nation's total output minus value lost through the wear and tear on machines and equipment.

newly industrialized countries (NICs): nations which, though not possessing the same level of industrial capability or standard of living found among developed nations, have experienced high rates of growth in industrialization and living standards.

opportunity cost: next best alternative that had to be sacrificed for the alternative chosen.

per capita GDP: a country's average gross domestic product (GDP) for each citizen, obtained by dividing the total GDP by the number of individual inhabitants. See gross domestic product.

per capita GNP: a country's average gross national product (GNP) for each citizen, obtained by dividing the total GNP by the number of individual inhabitants. See gross national product.

per capita output: value of output per person, obtained by dividing total value of output by the total number of individuals being considered.

perestroika: Russian word meaning "restructuring"; applied to reworking of the Soviet economy.

price elasticity of demand: the amount of responsiveness that quantity demanded has to change in price.

price rivalry: competition among sellers of similar goods to win more business by offering the lowest prices.

price system: a system in which supply and demand forces direct privately owned resources to their highest-valued use, with prices serving as signaling and rationing devices. See market economic system.

private property: goods owned by individuals or groups rather than by government.

privatization: a program to shift enterprises owned and operated by government to private ownership and management.

production: process of changing resources into goods.

productivity: ability to produce greater quantities of goods and services in better and faster ways.

profit: money left after all the costs of production, distribution, and taxes have been paid.

quota: see import quota.

rate of saving: the fraction of income which is saved rather than used for consumption over a certain period.

real GNP: gross national product corrected for inflation.

real income: amount of goods or services a person can actually buy with his or her income.

recession: a period, by formal definition, of at least six months in which economic activity does not grow.

resource: anything people can use to make or obtain what they need or want.

saving: non-use of income for a period of time so that it can be used later.

second economy: economic activity that takes place in avoidance of the government; part of the underground economy or black market. See black market and underground economies.

shortage: situation resulting when there is a larger quantity demanded than supplied at a particular price.

socialism: system in which government owns the basic factors of production and controls how they are used.

specialization: process of a nation producing and exporting a limited number of goods for which it is particularly suited.

stock: share of ownership in an enterprise that issued the stock; entitles share owner to a certain part of the enterprise's profits and sometimes to a vote in certain matters, such as electing a board of directors.

supply: the amounts of a good available to buy.

terms of trade: the relationship between the prices of goods a country exports and the prices of the goods it imports. The terms of trade determine the quantity of exports which must be traded for some amount of imports.

tariff: a tax on imports.

Third World: the underdeveloped countries of the world, taken collectively.

trade deficit: the result of importing more goods and services from abroad than is sold as exports abroad.

traditional economic system: system in which economic decisions are based on customs, beliefs, and ways of doing things that have been handed down from generation to generation.

trans-european firms: firms which carry on business operations in two or more European countries.

trigger price: a minimum price level for a certain good, which, if the domestic price of the good falls below that level will "trigger" restrictions on imports of competing goods.

underground economies: that part of a nation's economy which operates outside of the regulations and taxation imposed by government authorities on economic activities.

value-added taxes (VATs): a tax based on the increase in value of a resource (the value added) because of activities carried on within the firm.

vertical integration: a firm that combines the stages of production from raw materials to the final product, or the act of combining the separate stages of production and distribution.

World Bank: see the Appendix on institutions.

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Part 6: Measuring Economic and Population Growth

Economists and demographers (not to mention bankers) are fond of measuring growth in economies, populations, and investments by the use of compound rates of growth, or compound interest: "the population of the U.S. is growing at one percent per year". But is that a lot or a little?

Most reported rates of growth sound low if you're not used to them, but even "low" rates of growth can have considerable effects over time. That's because they are "compounded". If I have a hundred dollars and it grows at 10 percent per year, I have \$110 at the end of the first year. Compounding means that I leave my interest earnings in the account, so that in the second year, it's \$110 which grows by ten percent. At the end of year two we have \$121. Then that grows at ten percent again. The hundred dollars will double in seven years, which seems pretty quick. How can we tell that?

There's a handy formula for relating the (compound) rate of growth--people usually omit the word "compound" when talking about it--to the doubling time. If r is the rate of growth, and t the number of years the growing quantity takes to double, then

$$r \times t = 70.$$

With the ten percent rate of growth of the investment we just looked at in the previous paragraph, to find the doubling time in years, we look at

$$t = 70/10, \text{ or } 7.$$

A few examples: The natural rate of growth (exclusive of immigration) of the U.S. population is now roughly seven tenths of one percent, so at that rate our population, without immigration, would take a hundred years to double. If you refer to the world tables we have reproduced in Part 7 of this volume, you'll see in the World Bank's Table 26 that the population of No. 19, Rwanda (in Africa), is growing at 4.1 percent per year. That may not sound fast, since the number is small, but it's a scorching rate of growth: Rwanda's population--if the rate continues--will double in roughly eighteen years. Many advanced countries, on the other hand, are hardly growing at all. Austria (No. 113) is growing at only a tenth of a percent per year, so Italy's population would take seven hundred years to double if present trends continue. Demographers figure that about the highest possible rate of growth for population in any known society is about five percent, which is well above Rwanda. For further perspective, economic historians estimate that the long-run rate of growth in per-capita income in the U.S. has been about 1.5 percent per year, implying a doubling time of 46 years, so we've been doubling our incomes every generation for the last two centuries or so.

Part 7: World Economic and Population Tables

The following tables are taken from the World Bank's **World Economic Report**, the best source for consistent reporting of the economic and demographic statistics of most countries of the world. It comes out in August each year, published with the Oxford University Press in New York City.

Table 1. Basic indicators

	Population (millions) mid. 1989	Area (thousands of square kilometers)	GNP per capita ^a		Average annual rate of inflation ^a (percent)		Life expectancy birth (years) 1989	Adult illiteracy (percent)	
			Dollars 1989	Average annual growth rate (percent) 1965-89	Average annual rate of inflation ^a (percent)			Female 1985	Total 1985
					1965-80	1980-89			
Low-income economies	2,948.4 t	36,664 t	330 w	2.9 w	8.0 w	9.1 w	62 w	58 w	44 w
China and India	1,946.4 t	12,849 t	350 w	3.6 w	3.2 w	6.6 w	65 w	56 w	42 w
Other low-income	1,002.0 t	23,816 t	300 w	1.4 w	19.2 w	14.9 w	55 w	62 w	51 w
1 Mozambique	15.3	802	80			34.9	49	78	62
2 Ethiopia	49.5	1,222	120	-0.1	3.4	2.0	48		38
3 Tanzania ^b	23.8	945	130	-0.1	9.6	26.1	49		
4 Somalia	6.1	638	170	0.3	10.2	42.8	48	94	88
5 Bangladesh	110.7	144	180	0.4	14.8	10.6	51	78	67
6 Lao PDR	4.1	237	180				49	24	56
7 Malawi	8.2	118	180	1.0	7.4	14.6	48	69	59
8 Nepal	18.4	141	180	0.6	7.8	9.1	52	88	74
9 Chad	5.5	1,284	190	-1.2	6.2	1.5	47	89	75
10 Burundi	5.3	28	220	3.6	5.0	3.7	49	74	66
11 Sierra Leone	4.0	72	220	0.2	7.9	54.1	42	79	71
12 Madagascar	11.3	587	230	-1.9	7.7	17.8	51	38	33
13 Nigeria	113.8	924	250	0.2	14.7	14.2	51	69	58
14 Uganda	16.8	236	250	-2.8	21.4	108.1	49	55	43
15 Zaire	34.5	2,345	260	-2.0	24.7	59.4	53	55	39
16 Mali	8.2	1,240	270	1.7	9.0	3.6	48	89	83
17 Niger	7.4	1,267	290	-2.4	7.5	3.4	45	91	86
18 Burkina Faso	8.8	274	320	1.4	6.4	4.6	48	94	87
19 Rwanda	6.9	26	320	1.2	12.5	4.0	49	67	53
20 India	832.5	3,288	340	1.8	7.5	7.7	59	71	57
21 China	1,113.9	9,561	350	5.7	-0.4	5.8	70	45	31
22 Haiti	6.4	28	360	0.3	7.3	6.8	55	65	62
23 Kenya	23.5	580	360	2.0	7.2	9.0	59	51	41
24 Pakistan	109.9	796	370	2.5	10.3	6.7	55	81	70
25 Benin	4.6	113	380	-0.1	7.4	7.5	51	84	74
26 Central African Rep.	3.0	623	390	-0.5	8.2	6.5	51	71	60
27 Ghana	14.4	239	390	-1.5	22.9	43.6	55	57	40
28 Togo	3.5	57	390	0.0	7.1	5.1	54	72	59
29 Zambia	7.8	753	390	-2.0	6.3	38.3	54	33	24
30 Guinea	5.6	246	430				43	83	72
31 Sri Lanka	16.8	66	430	3.0	9.4	10.9	71	17	13
32 Lesotho	1.7	30	470	5.0	6.7	12.8	56	16	26
33 Indonesia	178.2	1,905	500	4.4	35.5	8.3	61	35	26
34 Mauritania	1.9	1,026	500	-0.5	7.6	9.4	46		
35 Afghanistan		652			4.9				
36 Bhutan	1.4	47					48		
37 Kampuchea, Dem.		181							
38 Liberia	2.5	111			6.3		54	77	65
39 Myanmar	40.8	677					61		
40 Sudan	24.5	2,506			11.5		50		
41 Viet Nam	64.8	330					66		
Middle-income economies	1,104.5 t	40,406 t	2,040 w	2.3 w	20.9 w	73.0 w	66 w	31 w	25 w
Lower-middle-income	681.8 t	23,921 t	1,360 w	2.0 w	22.2 w	65.7 w	65 w	32 w	26 w
42 Angola	9.7	1,247	610				46		59
43 Bolivia	7.1	1,099	620	-0.8	15.9	391.9	54	35	26
44 Egypt, Arab Rep.	51.0	1,001	640	4.2	6.4	11.0	60	70	56
45 Senegal	7.2	197	650	-0.7	6.5	7.3	48	81	72
46 Yemen, Rep.	11.2	528	650				48		
47 Zimbabwe	9.5	391	650	1.2	5.8	11.0	64	33	26
48 Philippines	60.0	300	710	1.6	11.7	14.8	64	15	14
49 Cote d'Ivoire	11.7	322	790	0.8	9.4	3.1	53	69	57
50 Dominican Rep.	7.0	49	790	2.5	6.7	19.1	67	23	23
51 Morocco	24.5	447	880	2.3	5.9	7.4	61	78	67
52 Papua New Guinea	3.8	463	890	0.2	8.1	5.6	54	65	55
53 Honduras	5.0	112	900	0.6	5.7	4.7	65	42	41
54 Guatemala	8.9	109	910	0.9	7.1	13.4	63	53	45
55 Congo, People's Rep.	2.2	342	940	3.3	6.8	0.3	54	45	37
56 Syrian Arab Rep.	12.1	185	980	3.1	7.9	15.0	66	57	40
57 Cameroon	11.6	475	1,000	3.2	9.0	6.6	57	55	44
58 Peru	21.2	1,285	1,010	-0.2	20.6	160.3	62	22	15
59 Ecuador	10.3	284	1,020	3.0	10.9		66	20	18
60 Namibia	1.7	824	1,030			13.4	57		
61 Paraguay	4.2	407	1,030	3.0	9.3	23.2	67	15	12
62 El Salvador	5.1	21	1,070	-0.4	7.0	16.8	63	31	28
63 Colombia	32.3	1,139	1,200	2.3	17.5	24.3	69	13	12
64 Thailand	55.4	513	1,220	4.2	6.2	3.2	66	12	9
65 Jamaica	2.4	11	1,260	-1.3	12.8	18.5	73		
66 Tunisia	8.0	164	1,260	3.3	6.7	7.5	66	59	46

Note: Economies with populations of less than 1 million are included only as part of the country groups in the main tables, but are shown in greater detail in Box A.1. Other economies not listed in the main tables nor in Box A.1, but also included in the aggregates, are shown in greater detail in Box A.2. For data comparability and coverage throughout the tables, see the technical notes. Figures in italics are for years other than those specified.

				GNP per capita ^a		Average annual rate of inflation ^d		Life expectancy at birth (years)	Adult illiteracy (percent)	
		Population (millions) mid 1989	Area (thousands of square kilometers)	Dollars 1989	Average annual growth rate (percent) 1965-89	1965-80	1980-89		Female 1985	Total 1985
67	Turkey	55.0	779	1,370	2.6	20.8	41.4	66	38	26
68	Botswana	1.2	582	1,600	8.5	8.4	12.0	67	31	29
69	Jordan ^c	3.9	89	1,640				67	37	25
70	Panama	2.4	77	1,760	1.6	5.4	2.5	73	12	12
71	Chile	13.0	757	1,770	0.3	129.9	20.5	72		6
72	Costa Rica	2.7	51	1,780	1.4	11.2	24.8	75	7	6
73	Poland	37.9	313	1,790			38.1	71		
74	Mauritius	1.1	2	1,990	3.0	11.8	8.5	70	23	17
75	Mexico	84.6	1,958	2,010	3.0	13.0	72.7	69	12	10
76	Argentina	31.9	2,767	2,160	-0.1	78.3	334.8	71	5	5
77	Malaysia	17.4	330	2,160	4.0	4.9	1.5	70	34	27
78	Algeria	24.4	2,382	2,230	2.5	10.5	5.2	65	63	50
79	Bulgaria	9.0	111	2,320			1.4	72		
80	Lebanon		10			9.3				
81	Mongolia	2.1	1,565					62		
82	Nicaragua	3.7	130			8.9		64		
Upper-middle-income		422.7 t	16,485 t	3,150 w	2.6 w	19.8 w	78.7 w	67 w	28 w	24 w
83	Venezuela	19.2	912	2,450	-1.0	10.4	16.0	70	15	13
84	South Africa	35.0	1,221	2,470	0.8	9.8	14.1	62		
85	Brazil	147.3	8,512	2,540	3.5	31.3	227.8	66	24	22
86	Hungary	10.6	93	2,590		2.6	7.5	71	d	d
87	Uruguay	3.1	177	2,620	1.2	57.8	59.2	73	4	5
88	Yugoslavia	23.7	256	2,920	3.2	15.2	96.9	72	14	9
89	Gabon	1.1	268	2,960	0.9	12.8	-1.0	53	47	38
90	Iran, Islamic Rep	53.3	1,648	3,200	0.5	15.5		63	61	49
91	Trinidad and Tobago	1.3	5	3,230	0.4	14.1	5.8	71	5	4
92	Czechoslovakia	15.6	128	3,450			1.6	72		
93	Portugal	10.3	92	4,250	3.0	11.7	19.1	75	20	16
94	Korea, Rep.	42.4	99	4,400	7.0	18.4	5.0	70		
95	Oman	1.5	212	5,220	6.4	19.9	-6.6	65		
96	Libya	4.4	1,760	5,310	-3.0	15.4	0.2	62	50	33
97	Greece	10.0	132	5,350	2.9	10.3	18.2	77	12	8
98	Iraq	18.3	438					63	13	11
99	Romania	23.2	238					71	d	d
Low- and middle-income		4,052.8 t	77,071 t	800 w	2.5 w	16.7 w	53.7 w	63 w	51 w	40 w
SubSaharan Africa		480.4 t	23,066 t	340 w	0.3 w	11.4 w	19.0 w	51 w	65 w	52 w
East Asia		1,552.2 t	15,582 t	540 w	5.2 w	9.3 w	6.0 w	68 w	41 w	29 w
South Asia		1,130.8 t	5,158 t	320 w	1.8 w	8.2 w	7.9 w	58 w	72 w	59 w
Europe, M.East, & N.Africa		433.2 t	11,658 t	2,180 w	.	13.1 w	21.8 w	65 w	51 w	40 w
Latin America & Caribbean		421.2 t	20,385 t	1,950 w	1.9 w	31.5 w	160.7 w	67 w	19 w	17 w
Severely indebted		554.3 t	21,059 t	1,730 w	2.1 w	29.1 w	140.5 w	66 w	28 w	24 w
High-income economies		830.4 t	33,875 t	18,330 w	2.4 w	7.6 w	4.6 w	76 w	.	.
OECD members		772.6 t	31,165 t	19,090 w	2.5 w	7.5 w	4.3 w	76 w	.	.
+Other		57.8 t	2,710 t	8,250 w	3.8 w	13.0 w	14.0 w	72 w	.	.
100	+Saudi Arabia	14.4	2,150	6,020	2.6	17.9	-4.4	64		
101	Ireland	3.5	70	8,710	2.1	11.6	7.8	74		
102	Spain	38.8	505	9,330	2.4	12.3	9.4	77	8	6
103	+Israel	4.5	21	9,790	2.7	25.2	117.1	76	7	5
104	+Hong Kong	5.7	1	10,350 ^e	6.3	8.1	7.1	78	19	12
105	+Singapore	2.7	1	10,450	7.0	5.1	1.5	74	21	14
106	New Zealand	3.3	269	12,070	0.8	10.2	11.4	75	d	d
107	Australia	16.8	7,687	14,360	1.7	9.3	7.8	77	d	d
108	United Kingdom	57.2	245	14,610	2.0	10.7	6.1	76	d	d
109	Italy	57.5	301	15,120	3.0	11.4	10.3	76	d	d
110	Netherlands	14.8	37	15,920	1.8	7.4	1.9	77	d	d
111	+Kuwait	2.0	18	16,150	-4.0	15.9	-2.7	74	37	30
112	Belgium	10.0	31	16,220			4.5	76	d	d
113	Austria	7.6	84	17,300	2.9	6.0	3.8	76	d	d
114	France	56.2	552	17,820	2.3	8.6	6.5	77	d	d
115	+United Arab Emirates	1.5	84	18,430			1.1	71		
116	Canada	26.2	9,976	19,030	4.0	5.5	4.6	77	d	d
117	Germany ^f	62.0	249	20,440	2.4	5.2	2.7	75	d	d
118	Denmark	5.1	43	20,450	1.8	9.3	6.0	75	d	d
119	United States	248.8	9,373	20,910	1.6	6.5	4.0	76	d	d
120	Sweden	8.5	450	21,570	1.8	8.0	7.4	77	d	d
121	Finland	5.0	338	22,120	3.2	10.5	7.0	75	d	d
122	Norway	4.2	324	22,290	3.4	7.7	5.6	77	d	d
123	Japan	123.1	378	23,810	4.3	7.6	1.3	79	d	d
124	Switzerland	6.6	41	29,880	4.6	1.6	3.6	78	d	d
Other economies		322.8 t	22,663 t	.	.	.	.	70 w	.	.
World		5,206.1 t	133,609 t	3,980 w	1.6 w	9.1 w	13.2 w	65 w	.	.
Oil exporters (excl. USSR)		265.2 t	12,120 t	1,840 w	1.2 w	14.5 w	7.3 w	58 w	57 w	47 w

† Economies classified by United Nations or otherwise regarded by their authorities as developing. a. See the technical notes. b. In all tables GDP and GNP data cover mainland Tanzania only. c. In all tables GDP and GNP data for Jordan cover the East Bank only. d. According to Unesco, illiteracy is less than 5 percent. e. In all tables GNP data for Hong Kong refer to GDP. f. In all tables data refer to the former Federal Republic of Germany only; for former German Democratic Republic data, see Box A.2.

Table 2. Growth of production

		Average annual growth rate (percent)									
		GDP		Agriculture		Industry		Manufacturing ^a		Services, etc. ^b	
		1965-80	1980-89	1965-80	1980-89	1965-80	1980-89	1965-80	1980-89	1965-80	1980-89
Low-income economies		4.8 w	6.2 w	2.6 w	4.0 w	7.6 w	8.6 w	7.2 w	11.5 w	5.5 w	6.2 w
China and India		5.0 w	7.6 w	2.7 w	4.8 w	7.2 w	10.6 w	7.3 w	12.4 w	5.7 w	7.5 w
Other low-income		4.6 w	3.4 w	2.5 w	2.5 w	8.5 w	3.1 w	6.9 w	7.4 w	5.2 w	4.4 w
1	Mozambique		-1.4		0.7		-4.9				-4.4
2	Ethiopia	2.7	1.9	1.2	-0.4	3.5	3.3	5.1	3.6	5.2	4.1
3	Tanzania	3.9	2.6	1.6	4.2	4.2	-1.0	5.6	-1.6	6.7	1.5
4	Somalia	3.5	3.0		3.8		2.5		0.2		1.2
5	Bangladesh ^c	2.5	3.5	1.5	2.1	3.8	5.0	6.8	2.7	3.4	4.9
6	Lao PDR ^c										
7	Malawi	5.5	2.7	4.1	2.2	6.4	2.4		3.1	6.7	3.3
8	Nepal	1.9	4.6	1.1	4.5						
9	Chad ^c	0.1	6.5	-0.3	2.5	-0.6	10.5			0.2	9.3
10	Burundi	7.1	4.3	6.7	3.1	17.4	5.8	6.0	6.1	1.4	6.3
11	Sierra Leone	2.7	0.6	3.9	2.4	-0.8	-3.4	0.7	-3.4	4.3	0.3
12	Madagascar ^c	1.6	0.8		2.4		0.5				
13	Nigeria	6.1	-0.4	1.7	1.3	13.1	-2.1	14.6	0.8	7.6	-0.4
14	Uganda	0.6	2.5	1.2	2.2	-4.3	4.6	-3.7	4.2	1.1	2.9
15	Zaire ^c	1.8	1.9		2.6		1.4		2.0		1.9
16	Mali ^c	4.2	3.8	2.8	1.5	1.8	7.9			7.6	5.9
17	Niger ^c	0.3	-1.6	-3.4	1.8	11.4	-3.3			3.4	-6.5
18	Burkina Faso		5.0		5.8		3.9		2.4		4.8
19	Rwanda ^c	4.9	1.5		-1.4		1.6		1.3		4.7
20	India	3.6	5.3	2.5	2.9	4.2	6.9	4.5	7.3	4.4	6.5
21	China ^c	6.9	9.7	2.8	6.3	10.0	12.6	9.5 ^d	14.5 ^d	10.3	9.3
22	Haiti ^c	2.9	-0.5	1.0	-0.4	7.1	-1.6	6.2	-2.1	2.7	0.1
23	Kenya	6.8	4.1	5.0	3.2	9.7	3.7	10.5	4.8	6.6	4.9
24	Pakistan	5.2	6.4	3.3	4.4	6.4	7.3	5.7	7.9	5.9	7.1
25	Benin	2.2	1.8		4.2		5.8		7.4		-1.0
26	Central African Rep	2.8	1.4	2.1	2.9	5.3	2.5		1.9	2.0	-0.5
27	Ghana ^c	1.3	2.8	1.6	0.9	1.4	3.2	2.5	4.3	1.1	5.3
28	Togo ^c	4.3	1.4	1.9	5.7	6.8	0.1		-0.2	4.8	-0.5
29	Zambia ^c	2.0	0.8	2.2	4.1	2.1	0.3	5.3	2.5	1.5	0.1
30	Guinea ^c										
31	Sri Lanka	4.0	4.0	2.7	2.2	4.7	4.4	3.2	6.2	4.6	4.9
32	Lesotho	6.8	3.7		-0.8		4.8		13.4		4.8
33	Indonesia ^c	7.0	5.3	4.3	3.2	11.9	5.3	12.0	12.7	7.3	6.6
34	Mauritania	2.1	1.4	-2.0	1.5	2.2	5.2			6.5	0.1
35	Afghanistan	2.9									
36	Bhutan		8.1		5.8		15.4		11.9		7.4
37	Kampuchea, Dem.										
38	Liberia	3.3		5.5		2.2		10.0		2.4	
39	Myanmar										
40	Sudan	3.8		2.9		3.1				4.9	
41	Viet Nam										
Middle-income economies		6.2 w	2.9 w	3.4 w	2.6 w	6.5 w	3.0 w	6.1 w	3.3 w	7.5 w	2.8 w
Lower-middle-income		5.5 w	2.5 w	3.4 w	2.1 w	6.2 w	2.6 w	6.1 w	2.5 w	6.1 w	2.3 w
42	Angola										
43	Bolivia ^c	4.4	-0.9	3.8	1.9	3.7	-3.8	5.4	-3.3	5.6	-0.5
44	Egypt, Arab Rep.	7.3	5.4	2.7	2.6	6.9	4.8			10.4	7.1
45	Senegal ^c	2.1	3.1	1.4	2.9	4.6	3.9	3.0	3.3	1.4	2.9
46	Yemen, Rep. ^c										
47	Zimbabwe	5.0	2.7		2.9		2.2		2.6		2.9
48	Philippines ^c	5.9	0.7	4.6	2.0	8.0	-0.8	7.5	0.5	5.2	1.2
49	Côte d'Ivoire	6.8	1.2	3.3	2.3	10.4	-1.7	9.1	8.2	8.6	0.4
50	Dominican Rep. ^c	8.0	2.4	6.3	1.8	10.8	2.9	8.9	1.1	7.3	2.3
51	Morocco ^c	5.7	4.1	2.4	6.7	6.1	2.8		4.1	6.8	4.2
52	Papua New Guinea ^c	4.1	2.1	3.1	1.7		3.1		1.6		1.7
53	Honduras	5.0	2.3	2.0	1.8	6.8	2.7	7.5	3.7	6.2	2.3
54	Guatemala ^c	5.9	0.4	5.1	0.8	7.3	-0.6	6.5	-1.2	5.7	0.6
55	Congo, People's Rep. ^c	6.2	3.9	3.1	3.2	9.9	4.7		6.8	4.7	3.2
56	Syrian Arab Rep. ^c	9.1	1.6	5.9	-0.9	12.0	5.2			9.4	1.2
57	Cameroon ^c	5.1	3.2	4.2	1.9	7.8	2.3	7.0	8.1	4.8	4.6
58	Peru ^c	3.9	0.4	1.0	3.6	4.4	-0.5	3.8	0.4	4.3	0.4
59	Ecuador ^c	8.8	1.9	3.4	4.3	13.7	1.8	11.5	0.2	7.6	1.3
60	Namibia		0.4		-1.0		-2.0		1.4		3.0
61	Paraguay ^c	7.0	2.2	4.9	3.4	9.1	-0.1	7.0	1.8	7.5	2.7
62	El Salvador ^c	4.3	0.6	3.6	-1.2	5.3	-0.6	4.6	-0.3	4.3	1.5
63	Colombia	5.7	3.5	4.5	2.6	5.7		6.4	3.1	6.4	2.8
64	Thailand ^c	7.3	7.0	4.6	4.1	9.5	8.1	11.2	8.1	7.6	7.4
65	Jamaica ^c	1.4	1.2	0.5	0.6	-0.1	1.4	0.4	2.1	2.7	1.0
66	Tunisia	6.5	3.4	5.5	1.6	7.4	2.4	9.9	5.9	6.5	4.5

Note: For data comparability and coverage, see the technical notes. Figures in italics are for years other than those specified.

		Average annual growth rate (percent)									
		GDP		Agriculture		Industry		Manufacturing ^a		Services, etc. ^b	
		1965-80	1980-89	1965-80	1980-89	1965-80	1980-89	1965-80	1980-89	1965-80	1980-89
67	Turkey	6.2	5.1	3.2	3.0	7.2	6.3	7.5	7.4	7.6	5.0
68	Botswana ^c	13.9	11.3	9.7	-4.0	24.0	13.0	13.5	5.3	11.5	11.9
69	Jordan										
70	Panama ^c	5.5	0.5	2.4	1.9	5.9	-3.5	4.7	-1.4	6.0	1.3
71	Chile ^c	1.9	2.7	1.6	4.1	0.8	3.1	0.7	2.9	2.7	2.3
72	Costa Rica ^c	6.3	2.8	4.2	2.8	8.7	2.7			6.0	2.8
73	Poland ^c		2.5								
74	Mauritius	5.2	5.9		3.0		9.1		10.9		4.9
75	Mexico ^c	6.5	0.7	3.2	0.8	7.6	0.4	7.4	0.7	6.6	0.9
76	Argentina ^c	3.4	-0.3	1.4	0.3	3.3	-1.1	2.7	-0.6	4.0	0.2
77	Malaysia ^c	7.4	4.9		3.9		6.5		8.0		3.9
78	Algeria ^c		3.5		5.3		3.8		7.5		2.5
79	Bulgaria		3.3		-2.7		5.5				1.9
80	Lebanon ^c										
81	Mongolia										
82	Nicaragua ^c	2.5	-1.6	3.8	-2.7	4.2	-2.4	5.1	-3.3	1.1	-0.5
Upper-middle-income		6.8 w	3.2 w		3.0 w		3.2 w				3.1 w
83	Venezuela ^c	3.7	1.0	3.9	3.4	1.5	1.4	5.8	4.9	6.3	0.4
84	South Africa	4.1	1.5		2.7		0.4		0.5		2.5
85	Brazil	9.0	3.0	3.8	3.0	10.1	2.7	9.8	2.2	9.5	3.2
86	Hungary ^c	5.6	1.6	2.7	2.0	6.4	0.6			6.2	2.2
87	Uruguay	2.4	0.1	1.0	0.5	3.1	-1.2		-0.2	2.3	0.7
88	Yugoslavia	6.1	1.3	3.1	1.0	7.8	1.4			5.5	1.2
89	Gabon ^c	9.5	1.2								
90	Iran, Islamic Rep.	6.1	3.4	4.5	5.7	2.2	2.9	10.0	-1.1	13.5	2.1
91	Trinidad and Tobago	5.0	-5.5	0.0	-6.2	5.0	-6.4	2.6	-8.4	5.8	-3.9
92	Czechoslovakia ^c		1.7		0.4		2.0				1.4
93	Portugal ^c	5.3	2.5								
94	Korea, Rep. ^c	9.9	9.7	3.0	3.3	16.4	12.4	18.7	13.1	9.6	9.1
95	Oman ^c	13.0	12.8		5.1		13.7		27.0		10.5
96	Libya	4.2		10.7		1.2		13.7		15.5	
97	Greece	5.8	1.6	2.3	0.3	7.1	0.9	8.4	0.2	6.2	2.5
98	Iraq										
99	Romania										
Low- and middle-income		5.8 w	3.8 w	3.0 w	3.3 w	6.7 w	4.5 w	7.8 w	6.0 w	7.1 w	3.5 w
Sub-Saharan Africa		4.2 w	2.1 w	1.9 w	2.0 w	7.5 w	0.7 w		3.4 w	4.5 w	2.3 w
East Asia		7.3 w	7.9 w	3.2 w	5.2 w	10.9 w	10.4 w	10.7 w	12.6 w	8.3 w	7.7 w
South Asia		3.7 w	5.1 w	2.5 w	2.9 w	4.4 w	6.7 w	4.6 w	7.1 w	4.5 w	6.3 w
Europe, M. East, & N. Africa			2.9 w		2.9 w		3.1 w				2.7 w
Latin America & Caribbean		6.1 w	1.6 w	3.1 w	1.9 w	6.7 w	1.6 w	7.2 w	1.5 w	6.8 w	1.6 w
Severely indebted		6.1 w	1.9 w	3.0 w	2.1 w	6.9 w	1.5 w	7.3 w	1.5 w	6.8 w	1.9 w
High-income economies		3.8 w	3.0 w		1.5 w		2.1 w		3.4 w	4.6 w	3.1 w
OECD members		3.8 w	3.0 w		1.3 w		2.2 w		3.3 w	4.5 w	3.1 w
†Other		8.2 w	2.4 w		6.4 w		-0.7 w		7.7 w		5.3 w
100	†Saudi Arabia ^c	10.6	-1.8	4.1	14.6	11.6	-4.4	8.1	8.8	10.5	2.4
101	Ireland	5.3	1.8	2.2 ^c	-8.4	10.1 ^c	-4.3			5.2 ^c	3.4
102	Spain ^c	4.6	3.1								
103	†Israel ^c	6.8	3.2								
104	†Hong Kong	8.6	7.1								
105	†Singapore ^c	10.0	6.1	2.8	-5.7	11.9	5.0	13.2	5.9	9.4	7.0
106	New Zealand ^c	2.4	2.2								
107	Australia ^c	4.0	3.5		3.0		3.0		1.7		3.6
108	United Kingdom	2.9	2.6	-2.8 ^c	-7.2	0.8 ^c	-0.6	-0.5 ^c	2.9	3.8 ^c	4.8
109	Italy ^c	4.3	2.4	0.9 ^c	0.9	3.9 ^c	1.6	5.8 ^c	2.3	4.0 ^c	2.8
110	Netherlands ^c	3.9	1.7	4.3 ^c	3.6	2.3 ^c	1.1			3.8 ^c	1.6
111	†Kuwait ^c	1.6	0.7		18.8		1.0		-0.2		0.6
112	Belgium ^c		1.8	0.4	2.5	5.1	1.1	5.9	2.0	4.3	1.6
113	Austria ^c	4.1	1.9	2.1	1.3	4.3	1.3	4.5	1.8	4.2	2.0
114	France ^c	3.8	2.1		2.4		0.3		-0.1		2.7
115	†United Arab Emirates		-4.5		9.3		-8.7		2.7		3.7
116	Canada										
117	Germany ^c	3.3	1.9	1.4	1.6	2.8	0.0	3.3	0.8	3.7	3.0
118	Denmark	2.6	2.2	0.8	2.5	1.8	3.6	3.1	2.1	3.2	1.7
119	United States ^c	2.7	3.3	1.0	3.2	1.7	2.9	2.5	3.8	3.4	3.3
120	Sweden		1.8		0.9		3.1		3.0		1.0
121	Finland	4.1	3.0	0.0	-1.4	4.3	2.9	4.9	3.3	4.8	3.3
122	Norway	4.4	3.6	-0.4	0.4	5.7	4.8	2.6	1.5	4.1	3.0
123	Japan ^c	6.6	4.0	-0.6	0.4	7.4	5.2	8.2	6.7	6.7	3.2
124	Switzerland ^c	5.7	2.1								
Other economies											
World		4.1 w	3.1 w		2.6 w		2.4 w		3.7 w		3.2 w
Oil exporters (excl. USSR)		6.6 w	1.2 w	3.9 w	5.4 w	6.1 w	-1.1 w	8.4 w	3.2 w	10.0 w	1.9 w

a. Because manufacturing is generally the most dynamic part of the industrial sector, its growth rate is shown separately. b. Services, etc. include unallocated items. c. GDP and its components are at purchaser values. d. World Bank estimate. e. Data refer to the period 1970-80.

Table 26. Population growth and projections

	Average annual growth of population (percent)			Population (millions)			Hypothetical size of stationary population (millions)	Age structure of population (percent)			
	1965-80	1980-89	1989-2000 ^a	1989	2000 ^a	2025 ^a		0-14 years		15-64 years	
								1989	2025 ^a	1989	2025 ^a
Low-income economies	2.3 w	2.0 w	1.9 w	2,948 t	3,633 t	5,201 t		35.5 w	26.9 w	60.0 w	65.3 w
China and India	2.2 w	1.7 w	1.5 w	1,946 t	2,300 t	2,950 t		31.4 w	22.3 w	63.3 w	67.3 w
Other low-income	2.5 w	2.7 w	2.6 w	1,002 t	1,333 t	2,251 t		43.3 w	32.8 w	53.6 w	62.6 w
1 Mozambique	2.5	2.7	3.1	15	21	41	87	44.0	37.7	52.9	59.0
2 Ethiopia	2.7	3.0	3.4	49	72	159	435	46.6	43.2	50.6	54.3
3 Tanzania	2.9	3.1	3.3	24	34	66	140	46.7	37.7	50.3	59.2
4 Somalia	2.6	3.0	3.1	6	9	17	39	45.9	39.7	51.2	57.2
5 Bangladesh	2.7	2.6	2.1	111	139	196	295	44.6	26.3	52.7	69.1
6 Lao PDR	1.9	2.7	3.1	4	6	10	21	44.0	37.0	53.1	59.5
7 Malawi	2.9	3.4	3.6	8	12	27	72	46.5	43.0	50.8	54.4
8 Nepal	2.4	2.6	2.5	18	24	37	60	43.0	29.0	54.9	65.9
9 Chad	2.0	2.4	2.7	6	7	14	29	41.8	37.2	54.7	58.9
10 Burundi	1.9	2.9	3.5	5	8	16	39	46.3	41.4	50.8	56.2
11 Sierra Leone	2.0	2.4	2.6	4	5	10	24	43.2	40.5	53.7	56.3
12 Madagascar	2.5	2.9	3.1	11	16	29	54	46.2	35.1	50.3	61.7
13 Nigeria	2.5	3.4	3.2	114	160	298	580	47.6	35.2	50.2	61.3
14 Uganda	2.9	3.2	3.5	17	25	51	119	48.6	40.6	49.1	57.0
15 Zaire	2.8	3.1	3.0	34	48	86	164	46.1	34.4	51.3	62.0
16 Mali	2.1	2.5	3.0	8	11	24	60	46.6	41.3	50.4	56.1
17 Niger	2.6	3.4	3.3	7	11	24	76	47.1	44.7	50.4	52.9
18 Burkina Faso	2.1	2.6	2.9	9	12	23	51	45.3	38.5	51.7	58.7
19 Rwanda	3.3	3.2	4.1	7	11	24	74	48.3	44.3	49.4	53.4
20 India	2.3	2.1	1.7	833	1,007	1,350	1,876	37.1	24.1	58.6	68.4
21 China	2.2	1.4	1.4	1,114	1,294	1,597	1,890	27.2	20.7	66.9	66.4
22 Haiti	1.7	1.9	2.1	6	8	12	21	40.1	31.0	55.8	64.0
23 Kenya	3.6	3.9	3.4	24	34	62	114	50.3	31.9	46.7	64.6
24 Pakistan	3.1	3.2	3.2	110	155	279	518	45.3	33.9	52.2	62.4
25 Benin	2.7	3.2	3.0	5	6	11	21	47.4	33.4	49.8	63.2
26 Central African Rep.	1.9	2.7	2.7	3	4	7	13	42.3	33.7	54.8	62.6
27 Ghana	2.2	3.4	3.1	14	20	35	63	46.7	32.8	50.2	63.5
28 Togo	3.0	3.5	3.3	4	5	9	18	47.9	35.4	49.1	61.4
29 Zambia	3.0	3.7	3.6	8	12	24	52	49.2	38.5	48.6	58.8
30 Guinea	1.5	2.5	2.8	6	8	15	34	46.2	40.4	51.3	56.8
31 Sri Lanka	1.8	1.5	1.1	17	19	24	28	32.5	21.0	62.3	66.0
32 Lesotho	2.3	2.7	2.7	2	2	4	6	43.2	29.2	53.2	66.0
33 Indonesia	2.4	2.1	1.6	178	213	282	371	36.8	23.3	59.3	68.2
34 Mauritania	2.4	2.4	2.8	2	3	5	14	44.4	42.4	52.4	55.0
35 Afghanistan	2.4	...	...	...	...	...	...	...	...	...	...
36 Bhutan	1.6	2.1	2.4	1	2	3	5	40.1	32.8	56.7	62.9
37 Kampuchea, Dem.	0.3	...	...	...	...	...	...	...	...	...	...
38 Liberia	3.0	3.2	3.0	2	3	6	11	44.8	32.6	51.9	63.2
39 Myanmar	2.3	2.1	2.1	41	51	70	96	37.5	24.0	58.4	68.5
40 Sudan	3.0	2.8	2.8	24	33	57	106	44.8	33.7	52.1	62.5
41 Viet Nam	..	2.1	2.2	65	83	119	167	40.1	24.2	55.7	68.8
Middle-income economies	2.3 w	2.1 w	1.9 w	1,104 t	1,354 t	1,954 t		36.2 w	26.4 w	58.7 w	65.0 w
Lower-middle-income	2.5 w	2.3 w	2.0 w	682 t	842 t	1,224 t		37.9 w	26.3 w	57.5 w	65.8 w
42 Angola	2.8	2.6	3.0	10	14	27	65	44.8	40.1	52.3	56.8
43 Bolivia	2.5	2.7	2.8	7	10	16	27	43.9	31.1	52.9	64.6
44 Egypt, Arab Rep.	2.1	2.5	1.8	51	62	86	120	39.2	24.4	56.5	67.6
45 Senegal	2.9	3.0	3.2	7	10	20	46	46.9	39.6	50.6	57.9
46 Yemen, Rep.	2.3	3.4	3.7	11	17	38	113	48.2	44.1	48.8	54.1
47 Zimbabwe	3.1	3.5	2.7	10	13	20	29	45.8	25.4	51.5	68.7
48 Philippines	2.8	2.5	1.8	60	73	101	137	40.1	23.9	56.4	68.4
49 Côte d'Ivoire	4.1	4.1	3.8	12	18	37	85	48.9	39.5	48.8	57.6
50 Dominican Rep.	2.7	2.3	1.8	7	9	11	15	38.1	23.2	58.4	68.0
51 Morocco	2.5	2.6	2.3	25	32	48	72	41.0	25.9	55.2	67.9
52 Papua New Guinea	2.4	2.5	2.4	4	5	7	11	41.2	27.6	56.3	67.8
53 Honduras	3.2	3.5	2.9	5	7	11	18	45.0	28.1	51.7	66.9
54 Guatemala	2.8	2.9	2.8	9	12	20	33	45.7	28.9	51.5	66.4
55 Congo, People's Rep.	2.8	3.4	3.4	2	3	7	16	45.0	39.2	51.0	57.8
56 Syrian Arab Rep.	3.4	3.6	3.7	12	18	36	69	48.3	34.9	49.0	61.3
57 Cameroon	2.7	3.2	3.2	12	16	33	69	46.9	37.0	49.3	59.5
58 Peru	2.8	2.3	2.1	21	27	37	50	38.4	23.8	58.1	68.4
59 Ecuador	3.1	2.7	2.2	10	13	19	26	40.1	24.0	56.3	68.4
60 Namibia	2.4	3.1	3.0	2	2	4	7	45.6	31.2	51.2	64.4
61 Paraguay	2.8	3.2	2.8	4	6	10	16	41.1	30.2	55.4	63.7
62 El Salvador	2.8	1.4	2.1	5	6	10	16	44.7	27.7	52.1	67.4
63 Colombia	2.5	2.0	1.6	32	38	51	64	35.9	22.2	60.0	67.9
64 Thailand	2.9	1.9	1.3	55	64	83	103	33.4	21.6	61.9	68.2
65 Jamaica	1.3	1.3	0.5	2	3	3	4	33.8	20.9	59.2	67.9
66 Tunisia	2.1	2.5	2.1	8	10	14	19	38.4	23.7	57.5	68.3

Note: For data comparability and coverage, see the technical notes. Figures in italics are for years other than those specified.

		Average annual growth of population (percent)			Population (millions)			Hypothetical size of stationary population (millions)	Age structure of population (percent)			
		1965-80	1980-89	1989-2000 ^a	1989	2000 ^a	2025 ^a		0-14 years		15-64 years	
									1989	2025 ^a	1989	2025 ^a
67	Turkey	2.4	2.4	2.0	55	68	92	121	35.1	23.1	60.7	67.6
68	Botswana	3.5	3.4	2.6	1	2	2	4	47.3	25.3	48.9	68.9
69	Jordan	2.6	3.3	2.8	4	5	9	16	35.6	32.7	40.4	63.1
70	Panama	2.6	2.2	1.6	2	3	4	5	35.4	21.9	59.9	67.2
71	Chile	1.7	1.7	1.3	13	15	19	23	30.7	21.3	63.4	65.7
72	Costa Rica	2.7	2.4	1.9	3	3	5	6	36.2	22.1	59.6	66.3
73	Poland	0.8	0.7	0.4	38	39	44	49	25.1	19.7	65.1	62.3
74	Mauritius	1.6	1.0	0.9	1	1	1	2	29.8	18.9	65.1	66.8
75	Mexico	3.1	2.1	1.8	85	103	142	185	38.1	22.9	58.3	68.3
76	Argentina	1.6	1.4	1.1	32	36	44	54	29.9	21.5	61.1	65.0
77	Malaysia	2.5	2.6	2.2	17	22	31	43	37.8	23.6	58.2	67.4
78	Algeria	3.1	3.0	2.8	24	33	52	78	44.0	25.7	52.1	68.5
79	Bulgaria	0.5	0.2	-0.4	9	8	8	9	19.4	17.9	64.5	61.1
80	Lebanon	1.7										
81	Mongolia	2.6	2.7	2.6	2	3	4	6	40.9	25.9	55.6	67.9
82	Nicaragua	3.1	3.4	3.1	4	5	9	14	46.1	28.4	51.3	66.4
Upper-middle-income		2.0 w	1.9 w	1.8 w	423 t	512 t	730 t		33.4 w	26.6 w	60.7 w	63.6 w
83	Venezuela	3.5	2.8	2.2	19	24	34	45	38.5	23.3	57.9	67.5
84	South Africa	2.4	2.4	2.3	35	45	65	96	38.2	25.3	57.9	67.1
85	Brazil	2.4	2.2	1.7	147	178	236	304	35.5	22.8	60.1	66.9
86	Hungary	0.4	-0.2	-0.1	11	10	10	11	19.7	17.7	66.9	61.6
87	Uruguay	0.4	0.6	0.6	3	3	4	4	25.9	20.0	62.7	63.9
88	Yugoslavia	0.9	0.7	0.6	24	25	28	30	23.1	18.6	67.7	62.1
89	Gabon	3.6	3.7	2.8	1	1	3	6	38.7	38.2	56.5	57.5
90	Iran, Islamic Rep.	3.1	3.5	3.3	53	77	158	420	44.0	38.8	53.0	56.9
91	Trinidad and Tobago	1.2	1.7	1.3	1	1	2	2	33.6	22.2	60.7	65.8
92	Czechoslovakia	0.5	0.3	0.3	16	16	18	19	23.4	19.1	64.9	62.9
93	Portugal	0.4	0.6	0.4	10	11	11	11	21.3	16.5	65.9	63.4
94	Korea, Rep.	2.0	1.2	0.9	42	47	53	56	26.4	18.0	68.7	66.0
95	Oman	3.6	4.7	3.9	1	2	5	10	45.9	36.8	51.7	58.5
96	Libya	4.3	4.2	3.6	4	6	14	36	46.0	39.5	51.4	56.7
97	Greece	0.7	0.4	0.2	10	10	10	9	19.5	15.4	66.6	60.6
98	Iraq	3.4	3.6	3.4	18	26	48	85	46.6	32.0	50.7	63.6
99	Romania	1.1	0.4	0.5	23	24	27	31	23.5	20.0	66.2	63.6
Low- and middle-income		2.3 w	2.1 w	1.9 w	4,053 t	4,987 t	7,155 t		35.7 w	26.7 w	59.7 w	65.2 w
Sub-Saharan Africa		2.7 w	3.2 w	3.2 w	480 t	679 t	1,311 t		46.8 w	37.4 w	50.6 w	59.4 w
East Asia		2.2 w	1.6 w	1.5 w	1,552 t	1,822 t	2,307 t		29.8 w	21.5 w	64.8 w	66.9 w
South Asia		2.4 w	2.3 w	1.9 w	1,131 t	1,396 t	1,959 t		38.7 w	25.8 w	57.4 w	67.5 w
Europe, M. East, & N. Africa		1.9 w	2.0 w	2.0 w	433 t	533 t	813 t		35.4 w	29.5 w	58.3 w	62.5 w
Latin America & Caribbean		2.5 w	2.1 w	1.8 w	421 t	513 t	700 t		36.6 w	23.6 w	58.9 w	67.1 w
Severely indebted		2.4 w	2.1 w	1.8 w	554 t	673 t	926 t		36.6 w	24.4 w	58.6 w	66.4 w
High-income economies		0.9 w	0.7 w	0.6 w	830 t	884 t	965 t		20.5 w	17.8 w	66.8 w	60.7 w
OECD members		0.8 w	0.6 w	0.5 w	773 t	813 t	862 t		19.7 w	16.8 w	67.1 w	60.6 w
†Other		2.8 w	2.4 w	1.8 w	58 t	71 t	103 t		32.1 w	26.4 w	61.9 w	61.9 w
100	†Saudi Arabia	4.6	5.0	3.7	14	21	43	89	45.1	36.3	51.8	59.1
101	Ireland	1.2	0.4	0.3	4	4	4	5	27.2	19.7	61.6	64.9
102	Spain	1.0	0.4	0.4	39	41	43	41	20.9	16.2	66.8	63.0
103	†Israel	2.8	1.7	1.8	5	6	7	9	31.8	21.2	60.2	65.1
104	†Hong Kong	2.0	1.5	0.9	6	6	7	6	21.6	15.9	69.6	61.3
105	†Singapore	1.6	1.2	1.0	3	3	3	4	23.7	18.0	70.8	61.5
106	New Zealand	1.3	0.7	0.8	3	4	4	4	23.4	18.7	67.4	62.7
107	Australia	1.8	1.4	1.4	17	19	23	24	22.4	18.1	66.9	63.0
108	United Kingdom	0.2	0.2	0.3	57	59	61	62	19.0	17.5	65.5	61.2
109	Italy	0.5	0.2	0.0	58	58	55	46	17.0	14.3	68.7	61.0
110	Netherlands	0.9	0.5	0.4	15	16	16	14	17.8	15.4	69.2	59.7
111	†Kuwait	7.1	4.4	3.1	2	3	4	5	36.1	21.3	62.5	64.9
112	Belgium	0.3	0.1	0.2	10	10	10	9	18.2	15.9	67.1	59.8
113	Austria	0.3	0.1	0.1	8	8	8	7	17.8	15.3	67.3	60.5
114	France	0.7	0.4	0.4	56	59	63	63	20.3	17.3	66.1	60.6
115	†United Arab Emirates	16.5	4.6	2.3	2	2	3	3	30.9	22.2	67.4	60.7
116	Canada	1.3	0.9	0.8	26	29	32	31	21.1	16.9	67.9	60.7
117	Germany	0.3	0.0	-0.1	62	62	57	61	15.1	14.3	69.5	58.8
118	Denmark	0.5	0.0	0.0	5	5	5	4	17.2	15.3	67.5	60.2
119	United States	1.0	1.0	0.8	249	272	309	319	21.6	18.0	66.1	61.1
120	Sweden	0.5	0.2	0.4	8	9	9	9	17.5	17.6	64.6	59.3
121	Finland	0.3	0.4	0.2	5	5	5	5	19.4	16.3	67.6	58.8
122	Norway	0.6	0.4	0.4	4	4	5	5	19.2	17.1	64.4	61.0
123	Japan	1.2	0.6	0.4	123	129	131	121	19.0	15.7	69.3	58.8
124	Switzerland	0.5	0.5	0.4	7	7	7	6	16.9	15.8	68.2	58.3
Other economies		1.0 w	1.0 w	0.7 w	323 t	349 t	404 t		25.8 w	20.2 w	64.8 w	63.5 w
World		2.0 w	1.8 w	1.6 w	5,206 t	6,220 t	8,524 t		32.6 w	25.4 w	61.1 w	64.6 w
Oil exporters (excl. USSR)		3.0 w	3.4 w	3.1 w	265 t	373 t	692 t		44.9 w	34.8 w	51.9 w	60.9 w

a. For the assumptions used in the projections, see the technical notes.

Table 27. Demography and fertility

	Crude birth rate (per 1,000 population)		Crude death rate (per 1,000 population)		Women of childbearing age as a percentage of all women		Total fertility rate			Assumed year of reaching net reproduction rate of 1	Married women of childbearing age using contraception (percent) ^b 1987
	1965	1989	1965	1989	1965	1989	1965	1989	2000 ^a		
Low-income economies	42 w	31 w	16 w	10 w	46 w	51 w	6.3 w	3.9 w	3.3 w		
China and India	41 w	26 w	14 w	8 w	46 w	53 w	6.3 w	3.2 w	2.5 w		
Other low-income	46 w	40 w	21 w	13 w	46 w	46 w	6.3 w	5.5 w	4.7 w		
1 Mozambique	49	46	27	17	47	45	6.8	6.4	6.2	2040	..
2 Ethiopia	43	52	20	18	46	43	5.8	7.5	7.3	2050	..
3 Tanzania	49	47	23	17	45	45	6.6	6.5	6.1	2040	..
4 Somalia	50	48	26	18	45	44	6.7	6.8	6.6	2045	..
5 Bangladesh	47	37	21	14	44	46	6.8	4.9	3.6	2015	32
6 Lao PDR	45	47	23	17	47	45	6.1	6.7	6.0	2040	..
7 Malawi	56	54	26	19	46	45	7.8	7.6	7.4	2050	..
8 Nepal	46	41	24	15	50	47	6.0	5.7	4.6	2025	15
9 Chad	45	44	28	19	47	46	6.0	5.9	6.6	2040	..
10 Burundi	47	48	24	15	44	45	6.4	6.8	6.6	2045	9
11 Sierra Leone	48	47	31	23	47	46	6.4	6.5	6.5	2045	..
12 Madagascar	47	46	22	16	47	44	6.6	6.5	5.8	2030	..
13 Nigeria	51	47	23	15	45	44	6.9	6.6	5.6	2035	..
14 Uganda	49	51	19	16	44	43	7.0	7.3	6.6	2045	5
15 Zaire	47	45	21	14	47	45	6.0	6.1	5.4	2035	..
16 Mali	50	50	27	19	46	45	6.5	7.0	7.0	2050	5
17 Niger	48	51	29	20	45	44	7.1	7.1	7.3	2055	..
18 Burkina Faso	48	47	26	18	47	45	6.4	6.5	6.3	2045	..
19 Rwanda	52	52	17	17	45	43	7.5	8.3	7.6	2055	..
20 India	45	31	20	11	48	49	6.2	4.1	3.0	2015	40
21 China	38	22	10	7	45	56	6.4	2.5	2.1	2000	74
22 Haiti	41	36	21	13	45	48	6.1	4.9	4.2	2035	11
23 Kenya	52	46	20	10	41	41	8.0	6.7	5.2	2035	27
24 Pakistan	48	46	21	12	43	45	7.0	6.6	5.4	2035	..
25 Benin	49	46	24	15	44	44	6.8	6.4	5.2	2035	..
26 Central African Rep.	34	42	24	15	47	46	4.5	5.8	5.3	2035	..
27 Ghana	47	45	18	13	45	44	6.8	6.3	5.1	2030	13
28 Togo	50	49	22	14	46	44	6.5	6.7	5.5	2035	..
29 Zambia	49	49	20	13	46	44	6.6	6.7	6.1	2040	..
30 Guinea	46	48	29	21	45	45	5.9	6.5	6.5	2045	..
31 Sri Lanka	33	21	8	6	47	53	4.9	2.5	2.1	1995	62
32 Lesotho	42	41	18	12	47	45	5.8	5.7	4.5	2025	..
33 Indonesia	43	27	20	9	47	51	5.5	3.3	2.4	2005	45
34 Mauritania	47	48	26	19	47	45	6.5	6.8	6.8	2050	..
35 Afghanistan	53	..	29	..	49	..	7.1	..	..	..	..
36 Bhutan	42	39	23	17	48	48	5.9	5.5	5.4	2035	..
37 Kampuchea, Dem.	44	..	20	..	47	..	6.2	..	..	..	..
38 Liberia	46	44	20	14	47	44	6.4	6.4	5.2	2035	6
39 Myanmar	40	30	18	9	46	50	5.8	3.9	2.9	2010	..
40 Sudan	47	44	24	15	46	45	6.7	6.4	5.4	2035	..
41 Viet Nam	..	32	..	7	..	48	..	4.0	2.9	2015	58
Middle-income economies	37 w	29 w	13 w	8 w	45 w	49 w	5.5 w	3.7 w	3.1 w		
Lower-middle-income	40 w	30 w	14 w	8 w	45 w	49 w	5.9 w	3.9 w	3.2 w		
42 Angola	49	47	29	19	47	45	6.4	6.5	6.6	2045	..
43 Bolivia	46	42	21	13	46	46	6.6	5.9	4.8	2030	30
44 Egypt, Arab Rep.	43	32	19	10	43	48	6.8	4.2	3.1	2015	38
45 Senegal	47	45	23	16	45	44	6.4	6.5	6.3	2045	12
46 Yemen, Rep.	49	53	27	18	47	43	7.0	7.7	7.5	2055	..
47 Zimbabwe	55	37	17	7	42	46	8.0	5.1	3.4	2015	43
48 Philippines	42	30	12	7	44	50	6.8	3.9	2.7	2010	44
49 Côte d'Ivoire	52	50	22	14	44	42	7.4	7.3	6.4	2045	..
50 Dominican Rep.	47	30	13	6	43	51	6.9	3.6	2.7	2010	50
51 Morocco	49	36	18	9	45	48	7.1	4.7	3.6	2020	36
52 Papua New Guinea	43	36	20	11	47	48	6.2	5.1	4.0	2020	..
53 Honduras	51	39	17	8	44	46	7.4	5.3	4.1	2025	41
54 Guatemala	46	39	17	8	44	45	6.7	5.5	4.3	2025	23
55 Congo, People's Rep.	42	48	18	15	45	43	5.7	6.5	6.3	2045	..
56 Syrian Arab Rep.	48	45	16	7	..	43	7.7	6.6	5.5	2035	..
57 Cameroon	40	44	20	12	47	42	5.2	6.5	5.9	2040	..
58 Peru	45	31	16	9	44	50	6.7	3.9	2.8	2010	46
59 Ecuador	45	32	13	7	43	49	6.8	4.1	3.0	2015	44
60 Namibia	46	43	22	12	46	44	6.1	6.0	4.8	2030	..
61 Paraguay	41	36	8	6	41	48	6.6	4.7	4.0	2030	45
62 El Salvador	46	35	13	8	44	46	6.7	4.7	3.8	2025	47
63 Colombia	43	25	11	6	43	53	6.5	2.9	2.2	2000	63
64 Thailand	41	22	10	7	44	54	6.3	2.5	2.1	1995	66
65 Jamaica	38	22	9	7	42	51	5.7	2.5	2.1	1995	55
66 Tunisia	44	30	16	7	43	49	7.0	4.0	2.8	2010	50

Note: For data comparability and coverage, see the technical notes. Figures in italics are for years other than those specified.

	Crude birth rate (per 1,000 population)		Crude death rate (per 1,000 population)		Women of childbearing age as a percentage of all women		Total fertility rate			Assumed year of reaching net reproduction rate of 1	Married women of childbearing age using contraception (percent) ^b 1987
	1965	1989	1965	1989	1965	1989	1965	1989	2000 ^a		
67 Turkey	41	29	15	8	45	50	5.7	3.6	2.7	2010	77
68 Botswana	53	36	19	6	45	44	6.9	4.9	3.1	2015	33
69 Jordan	53	43	21	6	45	45	8.0	6.3	5.2	2035	...
70 Panama	40	25	9	5	44	52	5.7	2.9	2.2	2000	...
71 Chile	34	23	11	6	45	53	4.8	2.6	2.1	2000	...
72 Costa Rica	45	26	8	4	42	52	6.3	3.1	2.3	2005	68
73 Poland	17	15	7	10	47	48	2.5	2.1	2.1	2030	...
74 Mauritius	36	18	8	6	45	55	4.8	1.9	1.8	2030	78
75 Mexico	45	28	11	6	43	51	6.7	3.4	2.4	2005	53
76 Argentina	23	20	9	9	50	47	3.1	2.8	2.3	2005	...
77 Malaysia	40	30	12	5	44	51	6.3	3.7	3.0	2015	...
78 Algeria	50	36	18	8	44	45	7.4	5.2	3.7	2020	...
79 Bulgaria	15	12	8	12	51	46	2.1	1.9	1.9	2030	...
80 Lebanon	40	...	12	...	42	...	6.2	...	...	...	...
81 Mongolia	43	35	16	9	46	48	5.9	4.8	3.7	2020	...
82 Nicaragua	49	40	16	7	43	46	7.2	5.4	4.2	2025	...
Upper-middle-income	33 w	27 w	12 w	8 w	46 w	50 w	4.8 w	3.4 w	3.0 w		
83 Venezuela	42	29	8	5	44	50	6.1	3.6	2.7	2010	...
84 South Africa	40	34	16	10	46	49	6.1	4.3	3.4	2020	...
85 Brazil	39	27	11	8	45	51	5.6	3.3	2.4	2005	65
86 Hungary	13	12	11	13	48	47	1.8	1.8	1.8	2030	73
87 Uruguay	21	17	10	10	49	47	2.8	2.3	2.1	1995	...
88 Yugoslavia	21	15	9	9	50	49	2.7	2.0	2.0	2030	...
89 Gabon	31	42	22	15	48	47	4.1	5.7	6.1	2045	...
90 Iran, Islamic Rep.	46	44	18	9	42	47	7.1	6.1	5.4	2055	...
91 Trinidad and Tobago	33	25	8	6	46	52	4.3	2.8	2.3	2005	53
92 Czechoslovakia	16	14	10	11	46	48	2.4	2.0	2.0	2030	...
93 Portugal	23	12	10	9	48	49	3.1	1.6	1.7	2030	...
94 Korea, Rep.	35	16	11	6	46	57	4.9	1.8	1.8	2030	70
95 Oman	50	44	24	6	47	43	7.2	7.1	5.9	2040	...
96 Libya	49	44	17	9	45	44	7.4	6.7	5.8	2050	...
97 Greece	18	11	8	9	51	47	2.3	1.5	1.6	2030	...
98 Iraq	49	42	18	8	45	44	7.2	6.2	5.1	2030	...
99 Romania	15	16	9	10	50	48	1.9	2.1	2.1	1985	...
Low- and middle-income	41 w	30 w	15 w	10 w	46 w	50 w	6.1 w	3.9 w	3.3 w		
Sub-Saharan Africa	48 w	47 w	23 w	15 w	45 w	44 w	6.6 w	6.6 w	6.0 w		
East Asia	39 w	23 w	11 w	7 w	45 w	54 w	6.2 w	2.7 w	2.3 w		
South Asia	45 w	33 w	20 w	11 w	47 w	48 w	6.3 w	4.4 w	3.4 w		
Europe, M.East, & N.Africa	33 w	30 w	14 w	10 w	46 w	47 w	4.8 w	4.1 w	3.7 w		
Latin America & Caribbean	40 w	28 w	12 w	7 w	45 w	50 w	5.8 w	3.5 w	2.6 w		
Severely indebted	37 w	28 w	12 w	8 w	45 w	49 w	5.6 w	3.6 w	2.8 w		
High-income economies	20 w	14 w	10 w	9 w	47 w	50 w	2.8 w	1.8 w	1.9 w		
OECD members	19 w	13 w	10 w	9 w	47 w	50 w	2.7 w	1.7 w	1.8 w		
†Other	34 w	24 w	8 w	6 w	45 w	51 w	5.0 w	3.5 w	3.2 w		
100 †Saudi Arabia	48	42	20	8	45	42	7.3	7.1	5.9	2040	...
101 Ireland	22	16	12	9	42	49	4.0	2.2	2.1	1990	...
102 Spain	21	12	8	8	49	49	2.9	1.4	1.6	2030	59
103 †Israel	26	22	6	7	46	49	3.8	2.9	2.3	2005	...
104 †Hong Kong	27	14	6	5	45	56	4.5	1.6	1.6	2030	72
105 †Singapore	31	18	6	5	45	59	4.7	1.9	1.9	2030	...
106 New Zealand	23	16	9	8	45	52	3.6	2.0	2.0	2030	...
107 Australia	20	15	9	7	47	53	3.0	1.9	1.9	2030	...
108 United Kingdom	18	14	12	11	45	48	2.9	1.8	1.9	2030	...
109 Italy	19	10	10	10	48	49	2.7	1.3	1.4	2030	...
110 Netherlands	20	12	8	9	47	53	3.0	1.5	1.6	2030	76
111 †Kuwait	48	27	7	3	45	52	7.4	3.7	2.7	2010	...
112 Belgium	17	12	12	11	44	48	2.6	1.6	1.6	2030	...
113 Austria	18	11	13	11	43	48	2.7	1.5	1.5	2030	...
114 France	18	14	11	10	43	48	2.8	1.8	1.8	2030	...
115 †United Arab Emirates	41	23	14	4	47	47	6.8	4.6	3.7	2020	...
116 Canada	21	14	8	7	47	53	3.1	1.7	1.7	2030	...
117 Germany	18	10	12	11	45	48	2.5	1.4	1.4	2030	78
118 Denmark	18	11	10	12	47	50	2.6	1.5	1.6	2030	...
119 United States	19	15	9	9	46	52	2.9	1.9	1.9	2030	...
120 Sweden	16	13	10	12	47	47	2.4	2.0	2.0	2030	...
121 Finland	17	12	10	10	48	49	2.4	1.7	1.7	2030	...
122 Norway	18	13	10	10	45	48	2.9	1.8	1.8	2030	...
123 Japan	19	11	7	7	56	50	2.0	1.7	1.7	2030	...
124 Switzerland	19	12	10	10	48	50	2.6	1.6	1.7	2030	...
Other economies	20 w	18 w	8 w	10 w	47 w	47 w	2.7 w	2.4 w	2.1 w		
World	35 w	27 w	14 w	9 w	46 w	50 w	5.2 w	3.5 w	3.0 w		
Oil exporters (excl. USSR)	49 w	43 w	20 w	11 w	44 w	45 w	6.9 w	6.1 w	5.2 w		

a. For assumptions used in the projections, see the technical notes for Table 26.

b. Figures include women whose husbands practice contraception; see the technical notes.

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The Economist is published in London, but printed in the United States as well. It's the best all-round periodical concerned with public policy and international relations, but it makes no concession to ignorance. You have to be up on things to read it, most of the time.

Foreign Affairs is published by the Council on Foreign Relations in New York. It tends to publish more articles by figures of public importance than scholarly works.

Foreign Policy. Scholarly, but not dull.

New York Times is, of course, excellent. On Sunday there are general reviews of happenings in the area of foreign policy. The **New York Times Magazine** also carries interesting material.

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ACKNOWLEDGEMENTS:

The Foundation for Teaching Economics wishes to thank:

The Henry Luce Foundation, Inc. for its financial support of this publication.

Steve Gerhart and James Klauder for their careful editing.

Helen Robinson for her word processing skills.

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